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RAILWAY AGE

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JULY 2, 1949

Twice as Fast

INAUGURATED in March 1947, the Union Pacific's "Day Livestock" has cut shipping schedules from Salt Lake City to Los Angeles in half. Through elimination of at least one stopover for feed and water, the Diesel-powered trains make the 785-mile run in 27 hours instead of the 58 to 60 hours required with steam.

Faster, smoother, safer— this splendid service is a tribute to the progressive policy of the railroad, to competent teamwork on the part of its livestock crews and to the General Motors Diesel locomotives which power a majority of the trains on this run.

ELECTRO-MOTIVE
DIVISION OF GENERAL MOTORS — LA GRANGE, ILL.
Home of the Diesel Locomotive

GENERAL MOTORS LOCOMOTIVES

42% MORE SERVICE FROM Chilled Car Wheels

MORE WORK . . . in terms of greater ton mileage—that's the true yardstick of the extra measure of service you now get from Chilled Car Wheels. Figured that way, your wheel dollar rolls a lot farther today than it did ten years ago.

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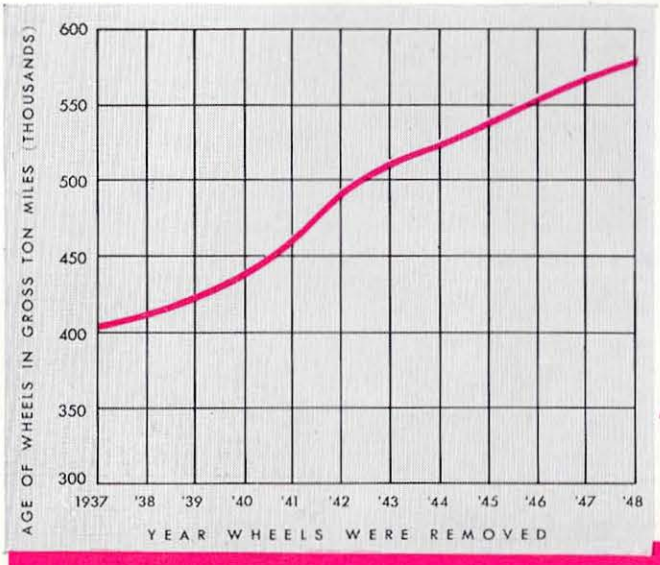
America's railroads are working harder than ever these days . . . in stepped-up train speeds; in greater car loadings. And Chilled Car Wheels are measuring up to these extra demands with plenty to spare. For example: Average g.t.m. per wheel per year during 1930-1939 were 47,900 compared with 95,600 for 1942-1948—double the earlier average.

But that's not all. Looking ahead, you can safely expect even better performance from Chilled Car Wheels. Remember, wheels removed in 1948 were wheels cast in 1942, based on average age in years. We members of AMCCW have made some big improvements since then . . . in manufacturing methods . . . in testing and inspection. They all point the way to still greater service records from Chilled Car Wheels.



AVERAGE GROSS TON MILES OF SERVICE PERFORMED BY CHILLED CAR WHEELS REMOVED FROM REGULAR RAILROAD CARS IN EACH OF THE PAST 12 YEARS.

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In our development as a country, few things have exerted so far-reaching an influence as the railroad. It has been, and is today, indispensable—to our industry, our way of life, our general well-being . . . The famed service of American railroads could never be possible without reliable wheels, the busiest part of any train. Bethlehem makes reliable wheels, makes them with a deep sense of responsibility—and the nation's great railroads use them with confidence. There is a craftsmanship in the making of this product, and Bethlehem has it. You cannot buy finer wheels anywhere.

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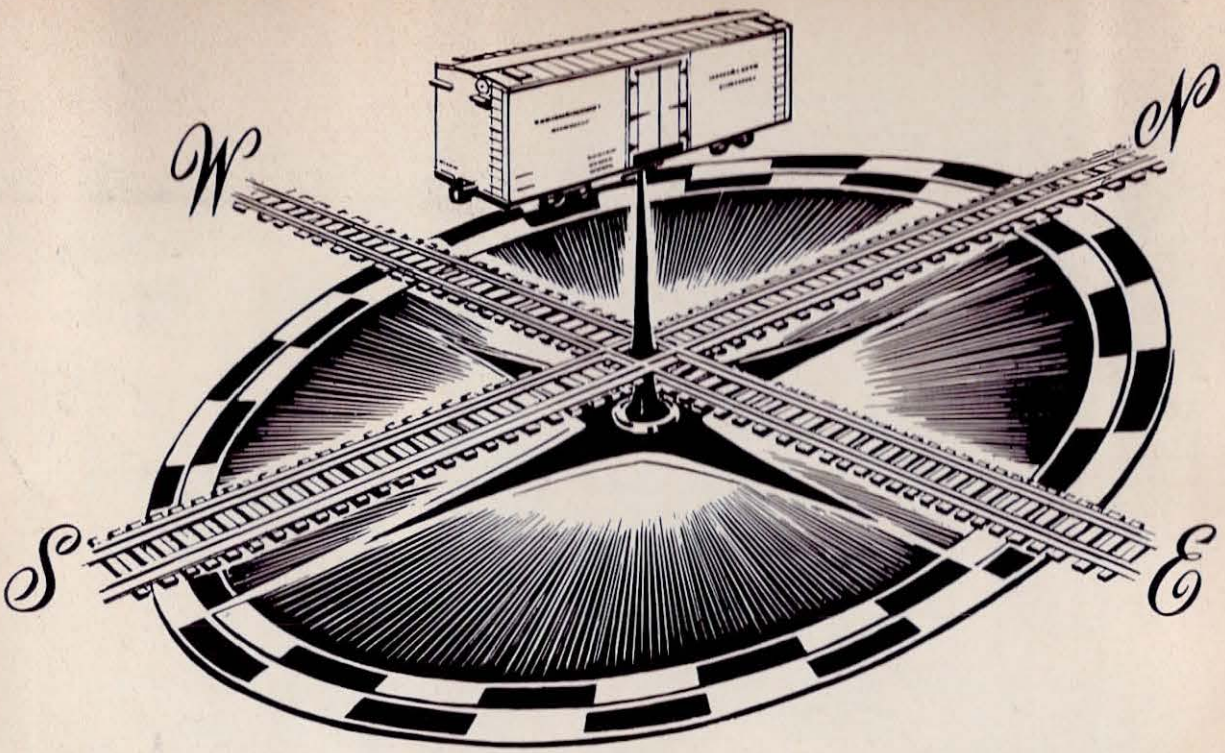

Efficient under *all* conditions!

A refrigerator car insulated with STREAMLITE HAIRINSUL is efficient — this is true no matter at which point of the compass it may be located — in frigid mountains or on torrid plains... on long hauls or yard "humps".

Leading refrigerator car builders have been specifying all-hair insulation for nearly half a century — and they find today that STREAMLITE HAIRINSUL, with its 40% less weight, is the most efficient and economical.

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LOW CONDUCTIVITY. Thoroughly washed and sterilized, all-hair heat barrier. Rated conductivity — .25 btu per square foot, per hour, per degree F., per inch thick.

LIGHT WEIGHT. Advanced processing methods reduce weight of STREAMLITE HAIRINSUL by 40%.

PERMANENT. Does not disintegrate when wet, resists absorption. Will not shake down, is fire-resistant and odorless.

EASY TO INSTALL. Blankets may be applied to car wall in one piece, from sill to plate and from one side door to the other. Self-supporting in wall sections between fasteners.

COMPLETE RANGE. STREAMLITE HAIRINSUL is available ½" to 4" thick, up to 127" wide. Stitched on 5" or 10" centers between two layers of reinforced asphalt laminated paper. Other weights and facings are available.

HIGH SALVAGE VALUE. The all-hair content does not deteriorate with age; therefore has high salvage value. No other type of insulation offers a comparable saving.

Dept. H97 Merchandise Mart Chicago 54, Ill.

95.7%

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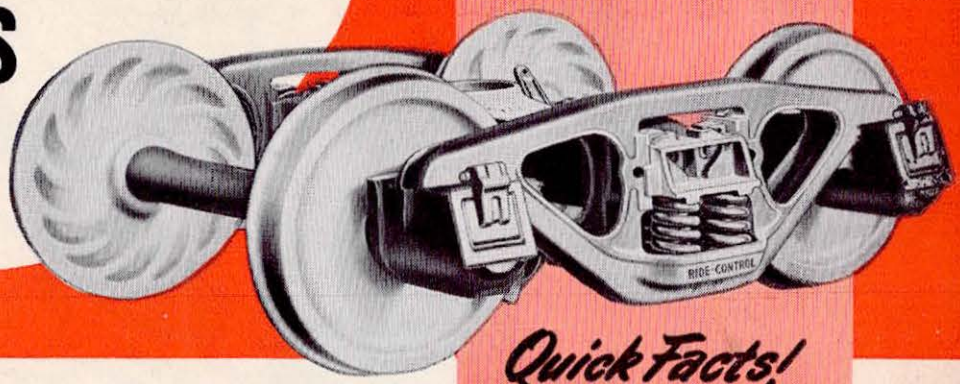


LONG SPRING TRAVEL HAS ALWAYS BEEN A RIDE-CONTROL TRUCK FEATURE

Long-travel truck springs rate among the *most important* contributions to safe, low-cost lading transportation. Sales prove this fact beyond question. Ever since January, 1944—when American Steel Foundries formally announced the *first* production truck with this softer, longer movement—"*Ride-Control Trucks*" and "*long spring travel*" have been virtually synonymous.

As of January 1, 1949, there were 104 different Ride-Control Truck users; 140,239 car sets sold—and, of these, 134,202 car sets have *long spring travel.* Adoption of long-travel springs as standard by many railroads, and by A.A.R., is fitting recognition of the initiative that first made—*and continues to make*—a truly scientific study of freight car truck improvement.

A-S-F *Ride-Control* TRUCK

CONSTANT FRICTION CONTROL
LONG SPRING TRAVEL

Quick Facts!

2½" SPRING TRAVEL
60,489 Car Sets

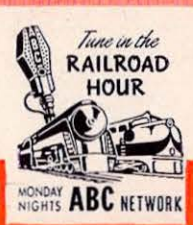
Box and Auto-Box Cars	44.2%
Hoppers, all types	29.2%
Gondolas	19.5%
Flat, Refrigerator, Stock, and Tank Cars	7.1%

3 1/16" SPRING TRAVEL
24,785 Car Sets

Box, Auto-Box, and Box-Express Cars	47.6%
Hoppers, all types	34.0%
Gondolas	15.2%
Flats and Refrigerator	3.2%

MAXIMUM SPRING TRAVEL
(3 11/16"-3 13/16")
48,545 Car Sets

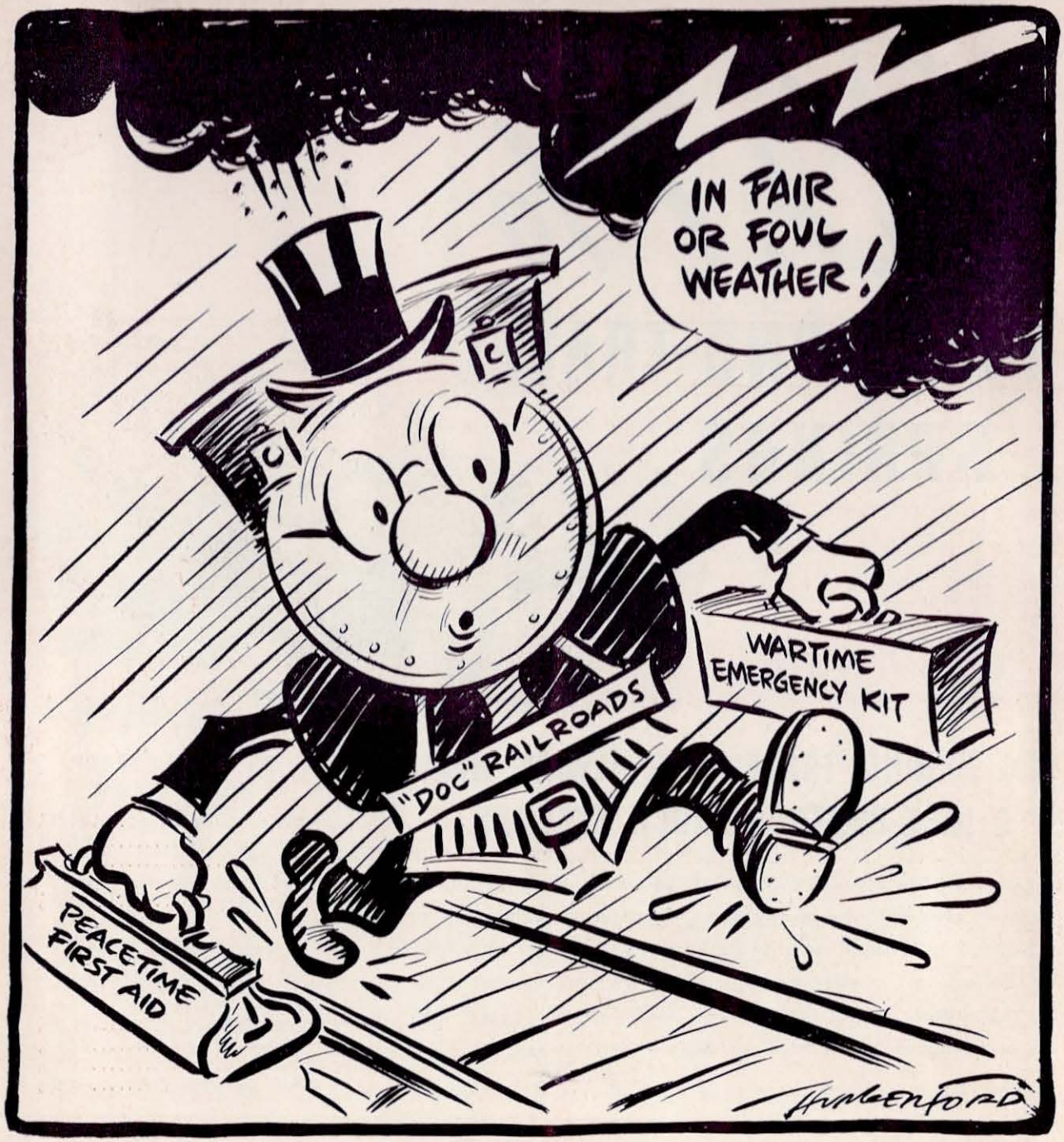
Box, Auto-Box, and Box-Express Cars	42.0%
Refrigerator Cars	41.0%
Hoppers, all types	7.7%
Gondolas	4.9%
Ballast, Flat, Tank, and Stock Cars	4.4%



AMERICAN STEEL FOUNDRIES

MINT-MARK OF ○ FINE CAST STEEL

"Doc" Certainly Deserves His Nation's Gratitude —By Hungerford



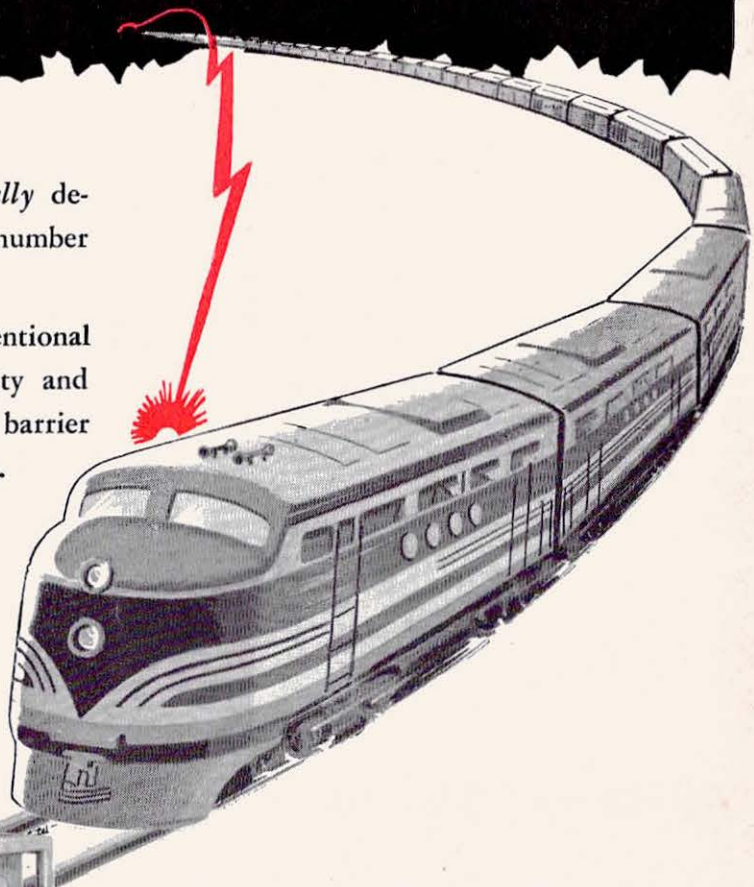
Watch for other railroad cartoons by Mr. Hungerford

A cut of suitable size may be obtained at cost by anyone wishing to reproduce the above cartoon.

Address requests to:

Edgewater Steel Company,
P. O. Box 478, Pittsburgh 30, Pennsylvania.

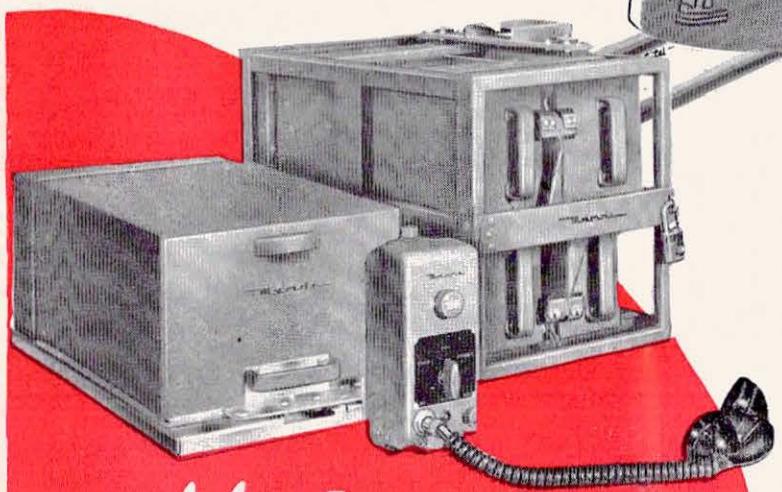
MOTOROLA ANNOUNCES "NEW RESEARCH LINE" FOR ADJACENT CHANNEL OPERATION



NOW! Motorola Sensicon equipment *specifically* designed for railroad usage *doubles* the usable number of assigned railroad frequencies.

HERE IS PROGRESS. A departure from conventional receiver design to achieve maximum selectivity and optimum control of intermodulation, the major barrier to successful adjacent channel systems operation.

THE HEART OF THE SENSICON'S 100 db "edge of adjacent channel" (±30 kc) super-precision-selectivity is the Permakay intermediate frequency wave filter—requires no maintenance and is *guaranteed* for the life of the receiver.



Motorola

FM 2-WAY RAILROAD RADIO

It's easy to see the value of end-to-end radio when visual signals are impracticable—but the *primary* value of 2-way radio is found in *normal daily routine operations.*

From the time the air is pumped up till the engine is disconnected at the end of the run, engine-to-caboose radio will speed your freight—expediting normal train inspections or initiating fast action in the case of a hot box or other emergency.

Motorola designs and builds 2-way radio *specifically engineered* to the exacting requirements of railroad usage. A Motorola engineer will call to *prove* that end-to-end radio will pay off in your operation. Write today.

GET THE FACTS!

MAIL THIS COUPON TODAY!

R. FLOYD McCALL, *Mgr. of Railroad Communications Sales*
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The M. & St. L.

Specialist in Transportation of Great Grain Crops

IN 1948, the United States harvested the greatest corn crop in history—3,650,548,000 bushels. This was more than half again as large as the relatively short crop of 1947.

Of last year's stupendous corn crop, 1,620,050,000 bushels or 44 per cent was produced in the four Midwest States in which the Minneapolis & St. Louis Railway is a big-scale carrier of grain. Iowa, the No. 1 corn state, harvested 666,730,000 bushels; Illinois, 549,793,000; Minnesota, 272,055,000; South Dakota, 131,472,000.

Conditions today forecast another huge corn harvest in 1949, creating new wealth for Midwest Farmers and new prosperity for their communities. As in each year for more than three-quarters of a century, much of this corn, the foods and feeds made from it and the livestock fattened on it will be transported by the M. & St. L.

Since 1871, efficient transportation of grains and other products of agriculture has been a specialty of the M. & St. L. Today, this modern railway is better equipped than ever before to maintain its long reputation for

FAST DEPENDABLE FREIGHT SERVICE

- **To Growers and Shippers of Grains and Livestock**
- **To Manufacturers and Distributors of Foods and Feeds**

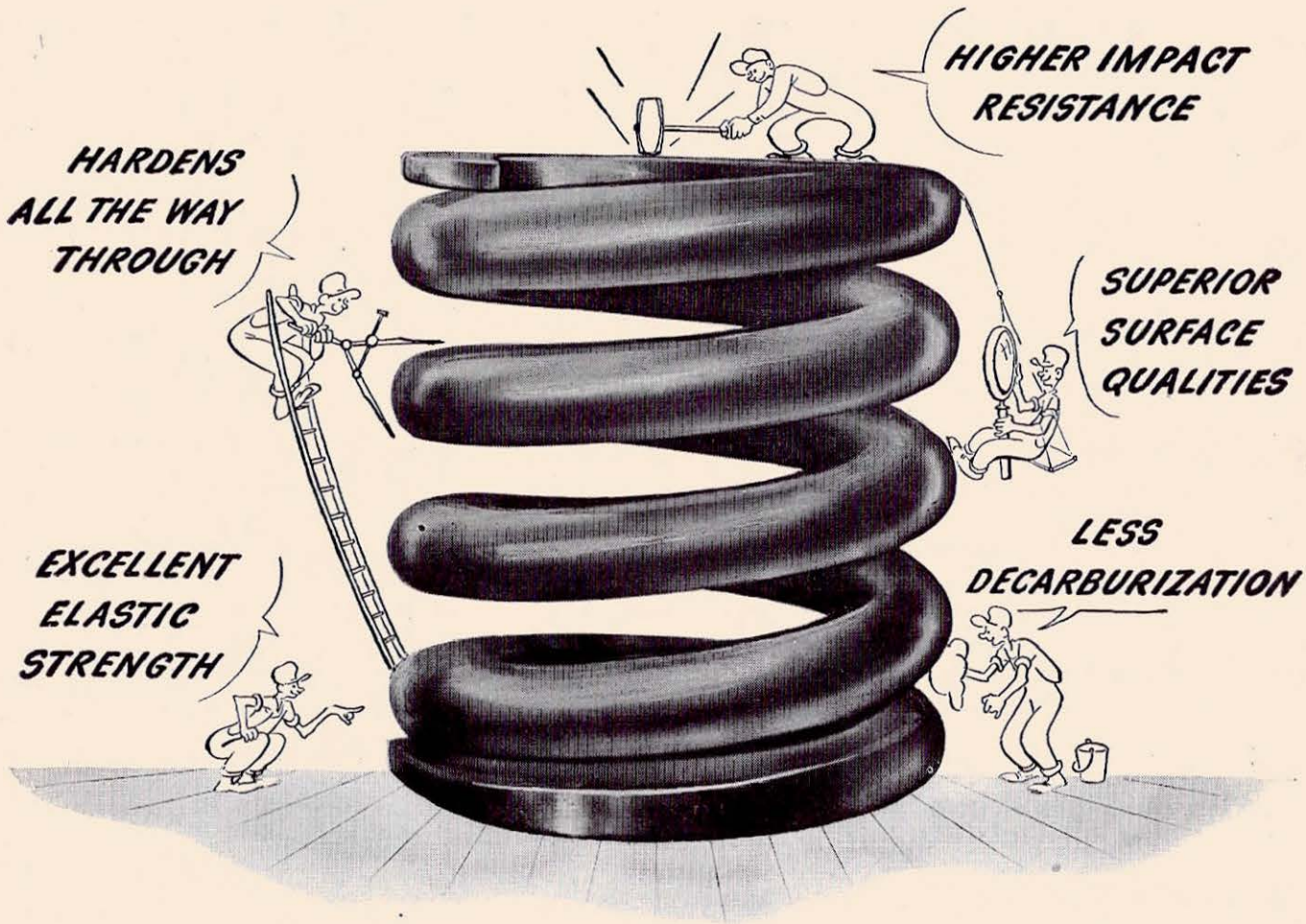
The Minneapolis & St. Louis Railway

General Offices: Northwestern Bank Building, Minneapolis 2, Minn.

Hot Coiled Springs Last Longer

when made of

Type "8655" Nickel Alloy Steel



Here's a steel that offers remarkable advantages for all types of heavy-duty springs... great shock resistance at normal and sub-zero temperatures, high elastic properties that resist permanent set, good hardenability... to mention a few.

It will pay you to investigate Type "8655" Nickel alloy steel for springs used in railway car suspensions, draft gears, snubbers... for tractors, rolling mills, heavy forging machinery, or other heavy-duty applications.

EMBLEM OF INCO SERVICE
TRADE MARK

Over the years, International Nickel has accumulated a fund of useful information on the selection, fabrication, treatment and performance of engineering alloy steels, stainless steels, cast irons, brasses, bronzes and other alloys containing Nickel. This information and data are yours for the asking. Write for "List A" of available publications.

THE INTERNATIONAL NICKEL COMPANY, INC. 67 WALL STREET NEW YORK 5, N.Y.

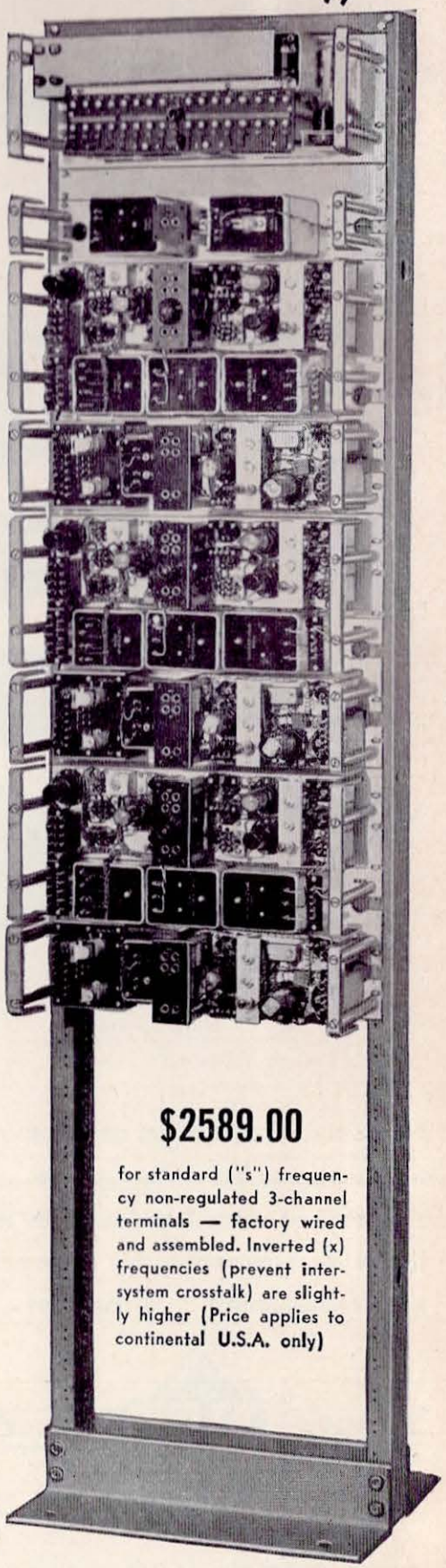
You Get More Telephone Lines Per $

with

Lenkurt

TYPE 33
(3 CHANNEL)

Carrier Telephone System



Here is a low-cost, medium-range carrier telephone system of 1, 2 or 3 channels—using frequencies which will coordinate with all standard carrier systems. It will "prove in" on circuits as short as 5 or 10 miles, and carry up to 250 miles without repeaters.

With Lenkurt Type 33, you can install three channels at once, or install one or two now, and the others as needed. Or, you can add the two higher-frequency channels to lines already equipped with Lenkurt 12A, 12B or 10G or similar single-channel systems of other manufacture. Its duplex carrier-frequency signaling equipment is adaptable to any type of signaling, and convertible to dial operation any time by changing a "plug-in" relay. Electronic pilot-channel regulators, which automatically compensate for attenuation changes over a broad 14 db. range, are available for the two higher frequency channels.

Find out just how little it will cost you to provide the best in carrier telephone service. Write NOW!

OPERATING DATA:

Channel Number	Carrier Freq. Band	Range under average line conditions	
		Without repeaters	With repeaters
1	4-11 kc	150-250 miles	450-750 miles
2	13-23 kc	125-200 miles	300-525 miles
3	25-35 kc	90-150 miles	225-375 miles

$2589.00

for standard ("s") frequency non-regulated 3-channel terminals — factory wired and assembled. Inverted (x) frequencies (prevent inter-system crosstalk) are slightly higher (Price applies to continental **U.S.A. only**)

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Vol. 127, No. 1 July 2, 1949

RAILWAY AGE

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IN THIS ISSUE

EDITORIALS:

Socialization Is Not Inevitable 15

Getting Justice by Entertainment 16

Promoting Worthy Grade Separations 17

COMMUNICATION 28

NEW BOOK 28

GENERAL NEWS 44

GENERAL ARTICLES:

Gas-Turbine-Electric Locomotive Ready For Service, by P. T. Egbert and G. W. Wilson 18

WHAT CAN BE DONE ABOUT THE 40-HOUR WEEK?
— As a President Sees It, by G. Metzman 22
— In Maintenance-of-Way Operations 24
— In Mechanical Departments, by J. E. Goodwin .. 26

1949 Railroad Fair Aims to Give 'Em a Good Time 29

Novel "Ice Ballet" Among Features Sponsored at Fair By Railroad Suppliers 33

Revised "Wheels A-Rolling" Pageant Is Again Fair's Major Spectacle 34

Colorful Array of Railroad Exhibits to Please This Year's Fair Customer 36

Nickel Plate Receives First Lima-Hamilton Switcher 38

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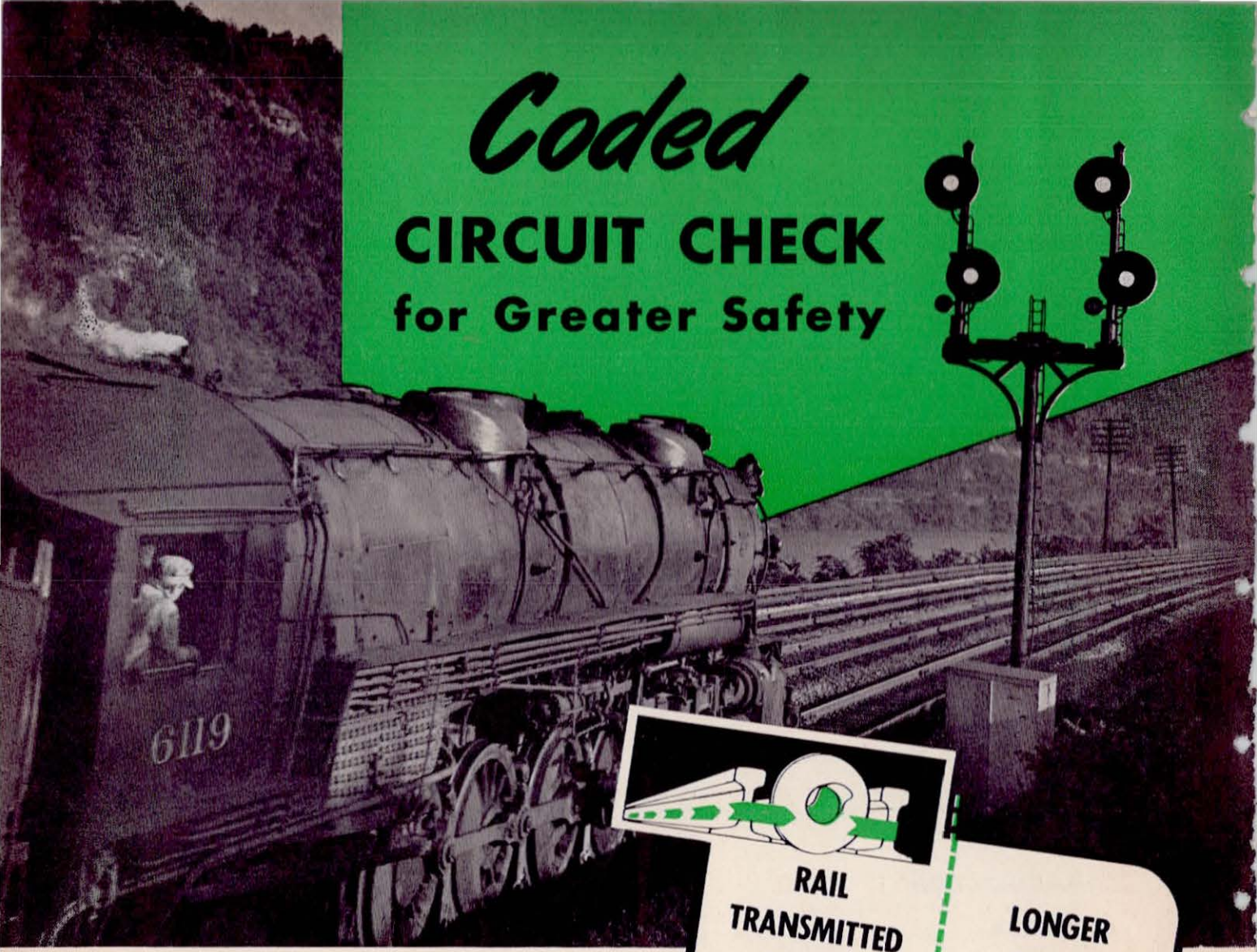

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LONGER TRACK CIRCUITS

BETTER SHUNTING SENSITIVITY

INCREASED SAFETY OF TRAIN OPERATION

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Coded Track Circuit Control

The code is the heart of "Union" Coded Track Circuit Control . . . formed by applying current to the rails in recurring pulses—such as clear 180 code, approach-medium 120 code and approach 75 code. Each of these pulses checks the integrity of the track circuit because the proceed indications can be given only so long as the code-following track relay is receiving and following code. This means that any stoppage of code or interruption of its receipt due to a train shunt or broken rail, for instance, or presence of foreign current, causes the signal to display "stop." For complete details, write for Bulletin No. 157.

UNION SWITCH & SIGNAL COMPANY

SWISSVALE PENNSYLVANIA

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

WEEK AT A GLANCE

THE 40-HOUR WEEK: With a 40-hour work week for its non-operating employees going into effect on September 1, the railroad industry is face to face with one of the gravest problems it has had to meet in its century-long history. The problem, of course, is how to continue to provide, after September 1, the quantity and quality of service which the public demands, without a disastrous increase in costs. Ever since the change in working hours became inevitable, railroad executives have been planning on how to meet that change; this week, in a sort of symposium on the subject, we present the ideas of some of the best minds in the railroad industry. The first of these three articles (page 22) is an abstract of an address delivered this week to the Mechanical Division of the A.A.R. by G. Metzman, president of the New York Central, who, treating the problem in its broad aspects, declared that greater mechanization is essential, and increased productivity of labor mandatory. Another article (page 26), from an address by J. E. Goodwin, vice-president and executive assistant to the president of the Chicago & North Western, relates especially to the 40-hour week in mechanical departments; and the third, on page 24, is a consideration of its effect on maintenance-of-way operations.

RAILROADS ARE DIFFERENT: No two railroads are exactly alike. Each has its own problems. Consequently, the suggestions for meeting the 40-hour week contained in our three articles on the subject may not all apply with equal force to all railroads. But they offer much that is worth careful consideration by the many executives who are being called on to cope with the broad changes which the shorter working week will invoive.

IS SOCIALIZATION INEVITABLE? No, says our leading editorial (page 15)—provided only that people stop considering it as inevitable. When people realize, as Great Britain is now demonstrating, that socialism is in practice inseparable from absolutism, even the socialists themselves may lose their enthusiasm for it. But there is great need today for leaders, in the railroad industry and elsewhere, who know where to lead, and how to lead by persuading rather than by pushing.

"THIS WAY TO THE BIG SHOW": The "Big Show" of the railroad industry—the Railroad Fair—is open again. Last year, in its first season, it exceeded all expectations as to attendance, popularity and public interest. This year, under the same general management, and in the same location, the Fair is brisker, dressier and more entertaining than ever. It is therefore, appropriately enough, the subject of a series of articles in this issue. The first, starting on page 29, is an over-all survey of the Fair, with a summary of pertinent facts concerning it. Another, at page 33, deals with the ice ballet, sponsored by leading manufacturers and suppliers of railroad equipment as an entirely new attraction not offered in 1948. And two other articles, beginning on pages 34 and 36, cover, respectively, the 1949 version of the popular "Wheels A-Rolling" pageant, and the novel and colorful array of special exhibits by individual railroads or groups of railroads.

BREAD AND CIRCUSES: The Railroad Fair is, primarily, entertainment. But it is also the first application by the railroad industry, on what may be considered a national basis, of the technique of using stunts and showmanship to "win friends and influence people." The direct, positive results of the Fair, in that particular direction, may be slow to develop and difficult to evaluate. But as one of our editorials (page 16) points out, the Fair does have definite public relations value because it must inevitably result in producing better public understanding of, and greater public liking for, the railroads.

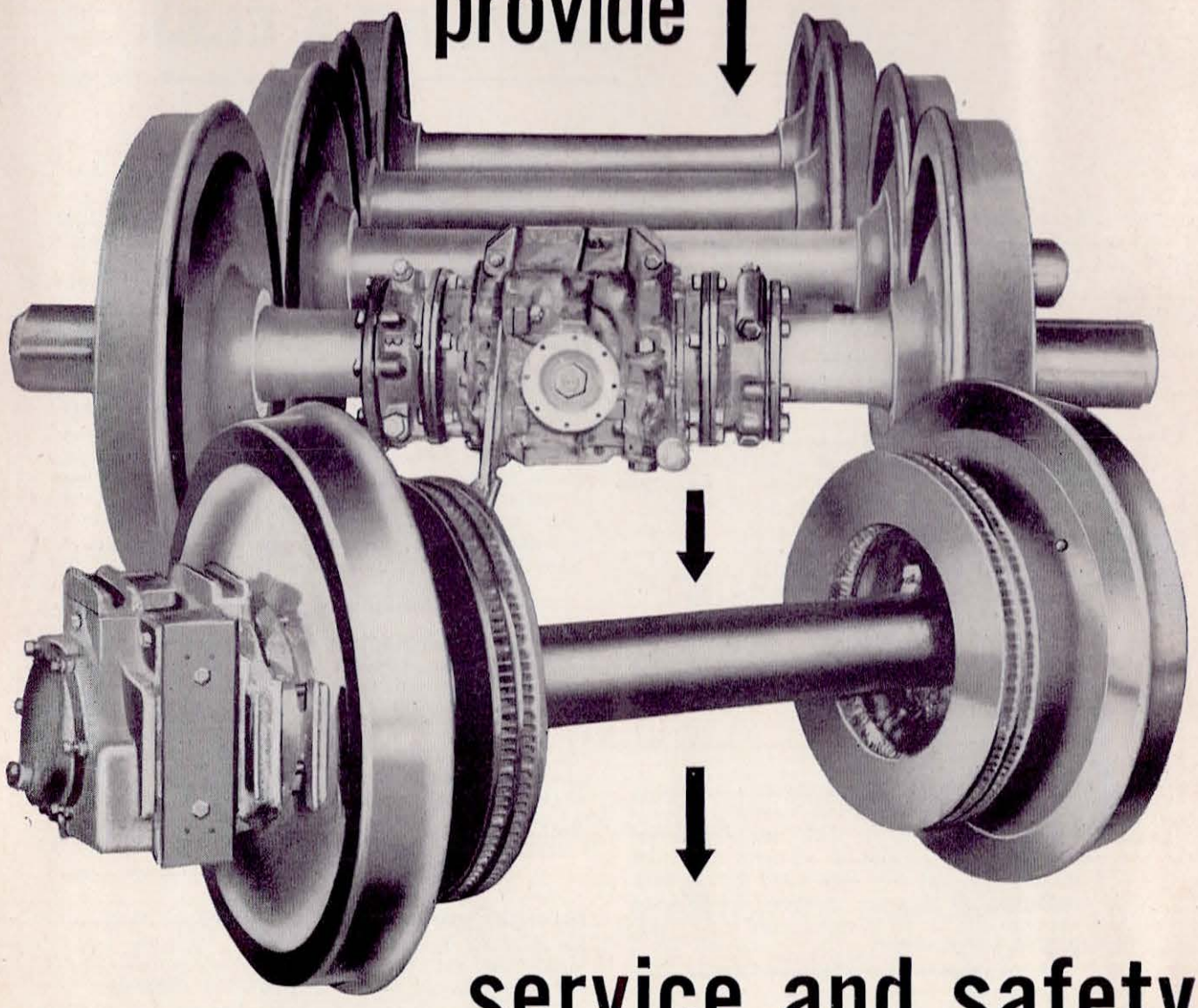
THE GAS-TURBINE-ELECTRIC: The announcement that a new type of railroad motive power is ready for its actual road tests (on the Union Pacific) might be the occasion for extravagant claims and great promises. But P. T. Egbert and G. W. Wilson, of the American Locomotive and General Electric Companies, respectively, who describe the new Alco-G.E. gas-turbine-electric locomotive in an article which begins on page 18, have followed a saner course, by presenting in almost ultra-conservative fashion the potentialities of this new type of motive power.

LIMA-HAMILTON DIESEL: A 120-ton, 1,000-hp. Diesel-electric switching locomotive, powered by a Hamilton Diesel engine, and with Westinghouse electrical equipment, has just been delivered by the Lima-Hamilton Corporation to the New York, Chicago & St. Louis. Because it is of unusual interest, as one of the first Diesel locomotives to be produced by that particular manufacturer, it is described in detail, and illustrated, in an article which begins on page 38.

HOW MANY MEN? Last winter, a Presidential emergency board summarily rejected the demand of the Brotherhood of Locomotive Engineers for a second engineman on Diesel locomotives. This week, at New York, the same board began hearings on the effort by the Brotherhood of Locomotive Firemen and Enginemen to increase its own strength by forcing the railroads to employ extra—and wholly unneeded—firemen on such locomotives. The first sessions of these hearings are reported in the News.

TOWARD STILL MORE REGULATION? If there's one thing the railroad industry needs, it is *less*—not *more*—regulation. Yet Congress, in the sacred name of "safety," is seriously considering bills which would bring under I.C.C. control almost everything but the color of railroad timetables. A full report of recent committee hearings on these bills is published in the News section.

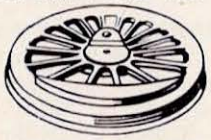
STANDARD STEEL WHEELS provide



service and safety

Standardize on STANDARD for

ROLLED WHEELS



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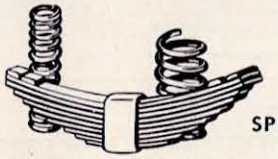
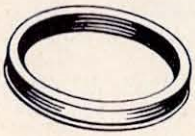


SPRINGS



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Available in all standard A.A.R. sizes, Standard Steel Works' rolled steel wheels are engineered to meet the maximum service and safety requirements imposed by today's high speeds and heavy loads. Scientific control of every operation, from initial melt to finished product, insures uniformity and quality. Rolled steel wheel centers, and high-strength rolled steel blanks for main drive gears in diesel locomotives, are also available.

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SOCIALIZATION IS NOT INEVITABLE

It used to be that a railroad officer could make a success of his work by being a competent railroad man. That is, he could expect to be at least reasonably proficient at running a railroad if he knew enough about finance to meet his maturities and keep expenses less than revenue; enough of operation and traffic to get profitable loading of his trains while serving shippers satisfactorily; and enough about the technical departments to keep his plant up to standards equal to or above the average, with costs no higher than the average. These qualifications are just as fundamental today as they were a generation ago, but other aptitudes and skill, in addition, are needed now. No one would, for instance, question the assertion that a leader in the railroad business today has to be much more of a diplomat than his predecessors had to be. It used to be sufficient to issue instructions—now, more often than not, orders can be issued, if at all, only with the consent of some government authority or of the people affected.

Finding a Middle Ground

There is a decided danger in this situation—namely, that it *invites the belief that management is fighting a losing battle and, consequently, that it might as well compromise readily on questions of principle in order to preserve peace.* But there is a middle ground between being, on the one hand, completely hard-boiled in relations with people and, on the other, giving in weakly to destructive political pressure. The man in a managerial position who does not work hard at learning how to lead people aright, since he is no longer able to drive them, is as far removed from dealing realistically with the situation which confronts him as is the one who conceives his duty in terms of gradual surrender of all the prerogatives of ownership.

The future of the railroads may well depend on how accurately a couple of hundred of the younger men now being drawn toward positions of top leadership in the industry are able to interpret political and economic trends, and to adjust themselves accordingly. In the opinion of this paper, they will make a tragic mistake if they accept the plausible and superficial opinion that the whole world is moving inexorably toward socialism. Careful examination of the available evidence suggests that that opinion is as far wrong as would be a belief that the heyday of unquestioned managerial authority is going to come back.

There is a lot of propaganda going on in behalf of the view that the trend is toward socialism anyhow; and that, consequently, the ambitious young man will do well to accept a fact he cannot change and place himself where he can benefit from the way things are moving rather than break himself

in quixotic resistance. "A fellow who tries to sweep into the wind is a fool," these young men are told. This pat theory has gained wide acceptance and one of its results is that many young men are flocking into government service—personally ambitious fellows of a type which a generation ago would have had to be shanghaied to be induced to accept government jobs. Because a good many professorial economists are little more than salesmen for collectivism, and since students at most institutions of learning acquire only a smattering of economics and political philosophy anyhow, it cannot be expected that many people, even those comparatively well educated, will have opinions on economic trends which differ very much from the most popular ready-made academic theories. And most of these theories are outright collectivist, or at least are tainted with collectivism.

The Grasp for Power

Such popular opinions are always wrong, because impressions of political or economic trends which are simplified to the degree necessary to enable large masses of people to comprehend and believe them cannot reflect facts which are never simple. A more accurate statement of what is actually going on in the world is that there is in progress an enormous and world-wide grasp for power by central governments everywhere. Collectivism — i.e., socialization—is merely one of the more obvious symptoms of the disease. The failure to discern the distinction between this symptom and the disease itself had led a lot of misguided business leaders, who are not socialists at all, to acquiesce in actions which are helpful to the increase in governmental power, even though not openly socialistic. Those with sufficient curiosity to pursue this line of inquiry to a revealing conclusion will be greatly helped by a new book entitled, "On Power," by a French writer, Bertrand de Jouvenel.

The heartening aspect of seeing the political and economic tendencies, more accurately, as a movement toward absolute power by government—rather than superficially only as the triumphant advance of socialism—lies in the fact that very few people, even the socialists themselves are going to favor this trend when, in due course, they wake up to what is really going on. Most of the Western world is, right now, sympathetic toward socialism and highly intolerant of absolutist government as exemplified by Russia and the late Hitler. However, when Britain and other countries of Western Europe obligingly demonstrate—as they are now preparing to do—that socialism cannot be made to work unless government remodels itself along Russian lines, the easy converts to socialism may wish they had been less precipitate in mounting that bandwagon. It may turn out that they weren't so "modern" and "realistic" as they were led to believe.

It takes a lot more, of course, than opposition to governmental encroachment to meet the needs of successful industrial leadership today—although such opposition is a part of the answer, and is much more "realistic" than is generally suspected. The primary need is for leaders who know where to lead; and how to lead by persuading, instead of by pushing. The alternative to general enslavement of everybody and everything by government is that people will learn to cooperate voluntarily. The technique of inducing people to work together willingly and productively without coercion is still in its swaddling clothes, but the leaders who will master this technique and advance it will have found the right answer—not only for the railroads, but for all industry and probably for civilization itself.

Stripped down to its essentials, our economic and industrial organization is a system of specialized production, based upon the division of labor. No man or community is self-sufficient. We work together or we starve. Since we have to work together, we can do so either voluntarily or by coercion. If we don't want to cooperate under compulsion, we shall have to learn to do so voluntarily, in free markets—and produce more that way than enforced collaboration could produce. The job of management is to learn how voluntary cooperation works and to persuade others into acting that way. The prescription is not hard to write, but is much more difficult to compound. Nevertheless, there it is—and the man who has to fill this prescription for the railroad industry cannot, for that reason, be excused from being just as good at solving operating, traffic, engineering, and financial problems as his predecessors ever were. The opportunities afforded for the exercise of managerial talents do not diminish with the passage of time—instead, they grow constantly greater.

GETTING JUSTICE BY ENTERTAINMENT

The second year of the Railroad Fair at Chicago is off to a good start. The few minor inadequacies of last year's exposition have been sifted out and many excellent new attractions have been added. The management has put into use the lessons learned last year, and has come forth with a fete brisker, dressier and more entertaining than ever, as described elsewhere in this issue.

This writer observed recently to a friend that the 2½-million paid admissions to last year's Fair, plus the nationwide attention which the 1949 edition has already attracted, ought to convince any old-school conservatives left in the railroad business that such an enterprise is worthwhile. "Oh, the hard-boiled boys don't deny that the fair is pulling

them in," our friend rejoined, "but some of them raise the question whether it does the roads any good. After all, few of the 2½ millions ship freight and many of them have no opportunity to ride on a train."

"The Fair isn't designed to get customers for the roads, primarily; it's to get public understanding," we insisted—for the record.

"But," said our friend, "the hard-boiled are going to raise the question how you are going to get understanding of tough economic concepts like unequal taxation, one-sided regulation and government subsidy with such devices as ice shows, mining-town stunts and historical pageantry. This latter stuff is fun, but will it get political action?"

Curiously enough, the answer must be yes, if the experience of others is applicable to the railroads. Showmanship does get action. The air lines have proved that stunt flying, "round-the-world" flights and hero-making pay off in public sympathy for aviation, which makes it politically feasible to shake down the public as taxpayers for airports and other aids to navigation. Why can't the railroads use the same friend-making technique to achieve more worthy ends? The armed forces, in their constant political fight for congressional appropriations, have long recognized that sending concert bands on tour, drilling for the public in parades and at West Point, and running off a cruise for a battleship are worth far more than arguments about long-term strategy.

Ironically, one of the difficulties with the railroads may be that their managements always insist upon being so straightforward and logical. A spade to them is always a spade—but this world is one of "ends by indirection." Getting people to know you exist and to like you is the first consideration.

To illustrate: The testy Chicago Tribune for a long time has baited the railroads; its support of private enterprise has not been consistently extended to the field of transportation, where it has at times supported free waterway schemes of all varieties. Yet the Tribune is apparently, as a corporate whole, having a whale of a lot of approving fun with the Railroad Fair. A week ago, it put out a 12-page special section, with 22 signed feature articles, to signalize the opening of the show. It has been tireless in promoting the fete with its subsidiary radio station. And it has gone so far as to publish an editorial pointing out the unfair political treatment of the railroads, and suggesting that the Fair will gain the popular friendship which the railroads must have. If a Fair can thus win the enthusiastic support of a great newspaper, what other friends may it not draw to the railroads? Man does not live by bread alone; he also hankers for bread *and* circuses. That isn't all he wants, of course—but a little gaiety won't hurt anybody, especially an industrial reputation which has been rendered dull for many folks by its very virtues.

PROMOTING WORTHY GRADE SEPARATIONS

In an increasing number of states, or where federal funds are involved, the principle is gaining recognition that, if the railroads are to be required to pay any part of the costs of grade-separation projects, the extent of their participation in specific undertakings should be limited to an amount based on the benefits realized by them. This is in marked contrast with the attitude, almost universally prevalent among public agencies only a few years ago, that the railroads should be required to pay the lion's share of grade-separation costs, even if they realized no benefits whatever.

This paper consistently questions the propriety of the expenditure of federal funds for transportation purposes but, when such funds are going to be appropriated and spent anyhow, there is every reason why a substantial part of them should be spent on grade-separation projects. It makes a lot more sense to spend available highway funds to cure traffic congestion and traffic hazards, which already exist than in the development of new highways, duplicating transportation facilities which are adequate to traffic needs.

An example of what railroads can do to promote specific grade-separation jobs is afforded by the activities of one large road with respect to a proposal to separate the grades on a multiple-track line extending through suburban territory adjacent to a large city.

When a grant of public funds became available to finance the preparation of preliminary plans for the job, the railroad agreed to act as the consulting engineer. For this purpose a staff was recruited, mostly from the personnel of the road's own engineering department, and was put to work in a separate office drawing plans for the job. One of the hurdles that had to be overcome before construction work could get started was the problem of obtaining the support and approval of the municipalities involved. To this end representatives of the railroad participated actively in a series of meetings with local groups, helping to explain the engineering features of the project and to outline its advantages for the property owners in the vicinity.

Doubtless there are other ways in which the railroads can help to gain support for meritorious grade-separation projects. During periods of reduced business activity it is not unlikely that there may be an increase in the amount of public funds made available for construction projects of various types. The railroads can render a real public service, and a service to themselves as well, by doing what they can to insure that a substantial part of such funds is spent where it will contribute the most to the relief of traffic hazards and traffic congestion, e.g., in crossing elimination.

GAS-TURBINE-ELECTRIC

The public announcement of the Alco-G.E. gas-turbine-electric locomotive could be an occasion for big headlines, broad claims, and considerable speculation; however, we believe that the railroads and the manufacturers will best be served by presenting it in a more conservative manner.

What possible good could result to any of the interested parties from beating the tom-toms about this untried locomotive prime mover which, at best, will take years to develop, test and prove? What is to be gained by creating a diversion at this time, when the railroads are just beginning to reap the benefits of a still relatively new Diesel-electric locomotive?

The American Locomotive Company and General Electric believe that they can best serve the interests of all parties in our growing, competitive, free-enterprise America by continuing to devote major attention to the design and production of motive-power units we are sure will help move more ton-miles at less cost.

Purchases indicate that the railroads are now thoroughly convinced of the operating economies that can be effected by the Diesel-electric locomotive. A revolution in motive power is taking place before our eyes. In 1948, for the first time in history, the number of passenger train car-miles propelled by Diesel-electric locomotives exceeded that of coal-burning locomotives. It seems certain that in years to come Diesel-electrics will haul the major portion of railroad passengers and tonnage.

Progress has always been based on change. Natural resources become exhausted. Requirements are different. Scientists discover new and better alloys. Consequently, any company that intends to stay in business must continually investigate all new possibilities; otherwise it may find itself out of the picture in a short time. It is quite natural, therefore, for the American Locomotive Company and General Electric to investigate the application of the gas-turbine prime mover to the railroad locomotive.

Consider the history of motive power development in the railroad industry. The maximum height and width of locomotives has been set for years by clearance requirements so, broadly speaking, the only general dimensional variable is overall length. A general index of locomotive progress in terms of better utilization of space and material is found in horsepower per foot of length. Such an index cannot take into account all pertinent factors. For example: fuel economy, maintenance and per cent of weight on drivers are important considerations in railroading. Horsepower per foot of length has increased steadily.

Current Diesel-electric designs deliver about 30 hp. per ft. of length. There is a practical limit to which this index can be carried; however, there is nothing to indicate that designers have reached this limit for internally-powered locomotives.

When a new and relatively small prime mover in the form of the gas turbine became available, Alco and G.E. felt that it merited through exploration. Current models of gas turbines for aircraft use develop one horsepower per pound of material, whereas the Diesel engine used in today's locomotives develops only one horsepower for every 16 to 18 lb. of material. On the surface, this looks promising to the locomotive designer. However, this big difference is not all designer's delight, because the application of the gas turbine to locomotives raises problems and involves factors peculiar to the railroad industry. The first and foremost of these is the matter of life. Engines for military aircraft have a life expectancy of only a few hundred hours. The railroad industry thinks in terms of thous-

Facing page—Freshly painted in Union Pacific colors, the first gas-turbine-electric locomotive made its public debut June 16 at the General Electric Company's Erie Works

Right—Operating station of the gas-turbine-electric locomotive

LOCOMOTIVE READY FOR SERVICE

Joint development of American Locomotive and General Electric now goes to Union Pacific for road testing

By P. T. EGBERT and G. W. WILSON
Vice-President, American Locomotive Company, and Manager, Locomotive and Car Equipment Division, General Electric Company

ands of hours between overhauls. Furthermore, certain auxiliaries are necessary for locomotive application. Consequently, the gas turbine evolved for railroad service rates one horsepower for six pounds of material. Even at this figure, the material is used about twice as efficiently as in a comparable Diesel engine. In terms of locomotive length, this means about 53 hp. per ft. of length as compared with 30 hp. for a Diesel-electric locomotive.

Certain railroad requirements as to design and performance must be kept in mind when designing any type of locomotive: (1) The height and width are strictly limited by the necessity of clearing bridges, tunnels, stations, etc., along the right of way; (2) Operating limitations, especially on curves, dictate a total length of 100 ft. or less per unit; (3) Track structure limits the desirable maximum load per axle to approximately 60,000 lb; (4) Under present operating conditions, the maximum horsepower per axle is about 500; (5) All the weight of the locomotive should be carried on drivers if possible; (6) The design preferably should be such as to permit operation from either end of the locomotive without turning; (7) The design should give good riding qualities for reasons both of comfort and ease on the track; (8) The running gear should be as simple and sturdy as possible (this dictates the use of swivel trucks whenever practical); (9) It is desirable that provision should be made to carry a fuel supply adequate for a minimum of twelve hours operation at full-locomotive output; and (10) The design should have modern lines and present a pleasing appearance.

In addition to these general considerations, inherent characteristics of the gas-turbine power plant set their own requirements: (1) The power plant is a single unit; (2) Arrangement must be made for speed reduction by gearing between the power plant and the traction generators. In one sense, this is an advantage, for it allows the optimum generator speed to be selected; (3) The fuel system must provide large storage capacity because the turbine fuel rate is relatively higher than that of a Diesel engine. The system must also be designed to handle low-grade residual fuel; (4) A starting system must be provided for the power

GENERAL CHARACTERISTICS OF THE 4,500-HP. ALCO-G.E. GAS-TURBINE-ELECTRIC LOCOMOTIVE

Locomotive

Horsepower rating	4,500
Tractive force (at 25 per cent adhesion) lb.	125,000
Continuous tractive force (at 20.5 m.p.h.), lb.	68,500
Maximum speed, m.p.h.	79
Height, ft.-in.	15—4-5/16
Weight on drivers, lb.	500,000
Width over hand rails, ft.-in.	10—7
Length inside knuckles	83—7½
Horsepower per ft. of length	53
Axles (all driving)	Eight
Gear ratio	65/18
Truck wheel base, ft.-in.	9—4
Total wheel base, ft.-in.	68—3
Maximum track curvature, deg.	21
Wheel diameter, in.	42
Supplies:	
Fuel oil, gal.:	
Bunker C	6,670
Diesel fuel	345
Lubricating oil, gal.	300
Water, gal.:	
Cooling	145
Boiler	574
Sand, cu. ft.	45

Gas Turbine Power Plant

Horsepower rating	4,800
Shaft output rating, kw.	3,500
Weight, lb.	25,000
Overall length, ft.	19
Overall width, ft.-in.	6—8
Turbine inlet temperature, deg. F.	1,400
Ratio of weight to horsepower, lb. per hp.	Five
Compressor pressure, atmospheres gage	Five
Overall thermal efficiency, per cent	Over 17
R.p.m. at rated shaft hp.	6,700
Designed altitude for rating, ft.	1,500
Ambient air temperature for rating, deg. F.	80
Fuel	Bunker C
Starting fuel	Diesel fuel
Air intake rate, cu. ft. per min.	80,000

plant. This is more complicated and difficult than in the case of a Diesel-electric locomotive; and (5) Provision must be made to handle a large amount of filtered air for combustion. In the case of the present power plant, this amounts to about 70,000 cu. ft. per min. A Diesel-electric of comparable horsepower requires only 15,000 cu. ft. per min. for combustion. Air needed for engine-cooling radiators brings the total air taken aboard the Diesel-electric to about 200,000 cu. ft. per min., but only the combustion air has to be filtered.

Two facts of distinct help to the locomotive designer are; (1) The power plant weighs less than half as much per horsepower as a locomotive-type Diesel engine; and (2) In the case of the gas turbine, only the lubricating oil requires cooling. This is about one tenth of the amount of cooling per horsepower that is required by a Diesel engine.

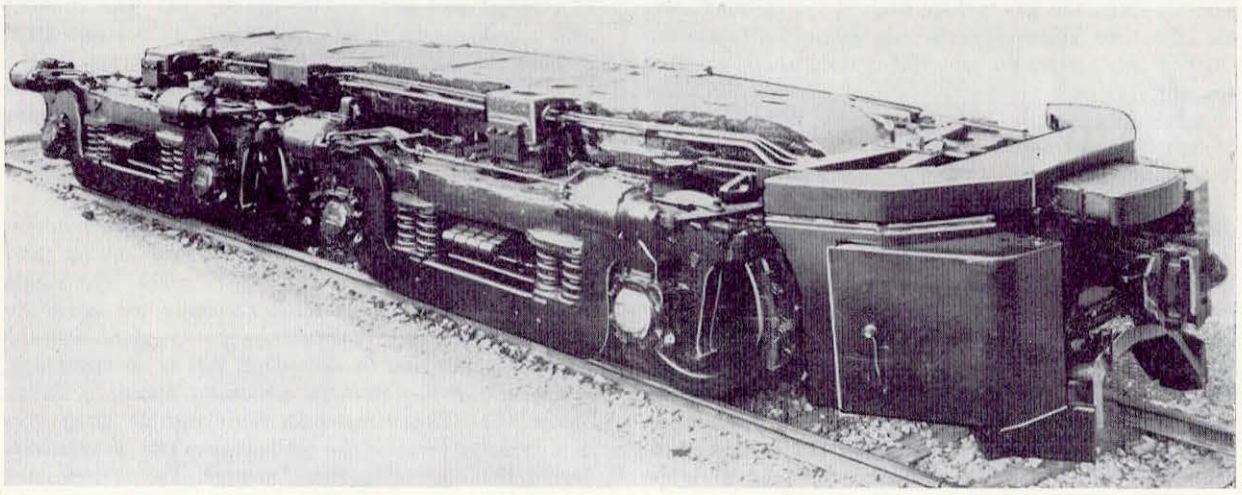
Description of the Locomotive

The locomotive is 83 ft., 7½ in. long over coupler knuckles and 78 ft. over cab ends. It is 14 ft., 3½ in. high over the roof sheet, and 10 ft. 7 in. wide over the handrails. The running gear consists of four two-axle, swing-bolster, swivel trucks with all axles motored. The locomotive is built for double-end operation and fitted with twin sealed-beam headlights. The cab is carried on two span bolsters, each of which rests on two trucks. The draft gear and pilots are attached to the outer ends of the span bolsters.

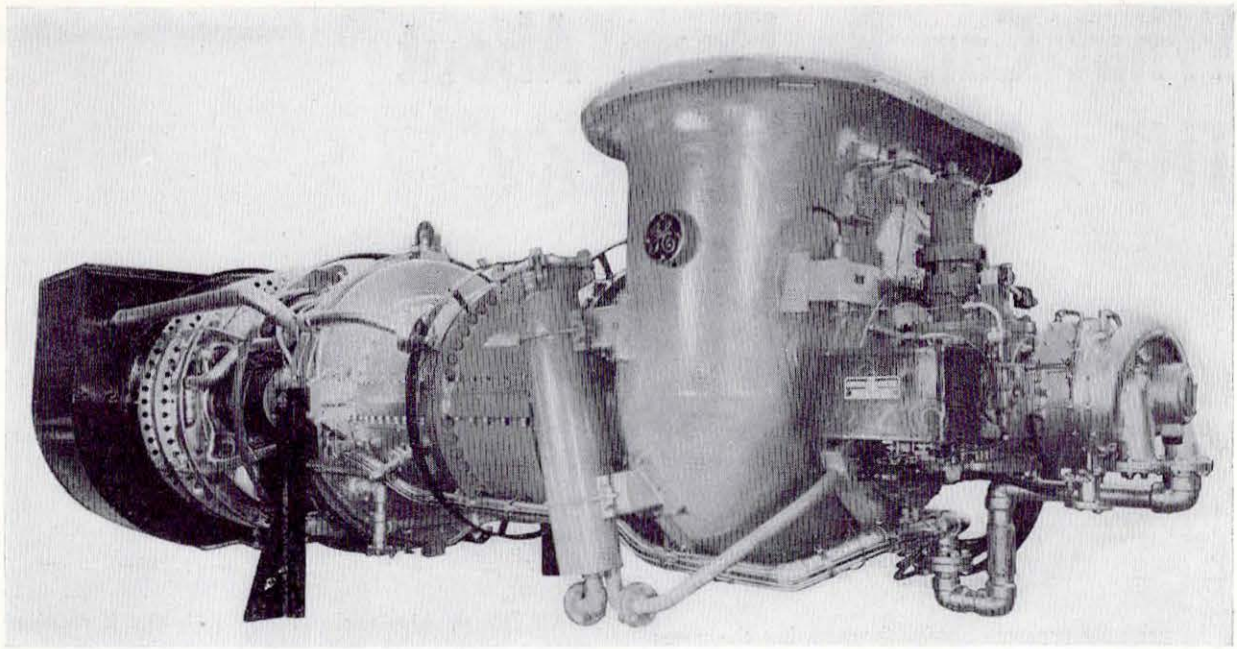
Under normal conditions of temperature and altitude, the locomotive has 4,500-hp. input to the generators for traction purposes. The power plant under the same conditions develops 4,800 hp. The difference of 300 hp. is used to drive auxiliaries.

Most of the area of the locomotive cab sides, except where there are sand boxes, is made up of air filters. This insures an ample supply of filtered air for combustion in the power plant and for equipment use.

The cab underframe which supports both the apparatus and the cab structure has been designed to act as a fuel tank. It consists of two tanks — one 31 ft. long, and the other 21 ft. long — separated by a dry-well section in the center. Beyond the shorter tank are two smaller tanks — one for Diesel fuel and the other for boiler water. This entire frame structure is about 33 in. high and 7 ft. wide. It is essentially a box member interlaced with baffles which serve the double purpose of stiffening the section and preventing the fuel from "sloshing." Stainless steel heating coils are fabricated into the bottom portion of the tank for warming the heavy residual fuel. The tanks have a combined



Half of running gear showing span bolster



General Electric 4,800-hp. locomotive gas turbine

capacity of about 6,600 gal. — sufficient fuel for about 12 hours operation at 4,500 hp.

The cab structure differs from the conventional truss type widely used on Diesel-electric locomotives. The underframe fuel-tank structure is stiff enough to carry the apparatus load and to withstand the stresses encountered in operation. The cab roof and sides are supported from this basic frame by umbrella type construction that carries the load, but does not contribute to the stiffness of the cab structure.

The nose sections and operating cabs at either end are symmetrical. The former house air-brake equipment, train control and miscellaneous apparatus. The latter contain the usual operating stations, equipped with controllers, air-brake stands, instrument panels, and controls for cab heaters, defrosters, window wipers, sanders, whistle and bell. There are three seats for crew members in each operating cab. These cabs are acoustically treated and insulated. They are separated from the equipment compartment by insulated bulkheads and doors. The central portion of the locomotive cab is the equipment compartment. This houses the electric controls in two groups adjacent to the end bulkheads. Next to the control groups are the traction-motor blowers. The central portion is occupied by the power plant, together with fuel and lubricating oil filters, and the main gear unit which drives the four traction generators and supports the two resistor groups used for dynamic braking. Next comes the gear-driven air compressor, the lubricating oil cooler and radiator section, the steam generator, the sump pumps and the Diesel-engine generator set for starting the turbine.

The power plant consists of a 15-stage, axial-flow compressor, taking air through an acoustically treated inlet housing, driven by a two-stage gas turbine. The compressed air is admitted to six combustion chambers where the fuel oil is introduced under pressure and burned. The hot gases pass directly into the two-stage turbine, and then are discharged through the roof. Roughly speaking, the turbine generates three times the net output power. The compressor load absorbs two-thirds of the total, and one-third appears at the output shaft as useful work. About 150,000 cu. ft. per min. of exhaust gases at 850 deg. F. are discharged through the roof opening at a velocity of about 150 m.p.h. This exhaust is noisy even at idling (about 60 per cent of full speed) but, due to its unpitched quality, the sound attenuates rapidly and is not objectionable except when one is standing close to the locomotive.

One characteristic that deserves particular mention is the inclusion, as far as possible, of standard components currently used on Diesel-electric locomotives. The two-axle swivel trucks are similar to those found on 1,500-hp. Diesel-electric freight locomotives. The traction motors are identical to those used on the Alco-G.E. 1,500 and 2,000-hp. Diesel-electric locomotives. The amplidyne control system and most of the control components are identical to those in current Diesel-electric locomotive use. Basically, the only untried portion of the locomotive is the power plant and fuel-handling system. The testing program can, therefore, be laid out to concentrate on these items, with little concern as to the satisfactory performance of the rest of the locomotive.

The designers are quite excited about the possibility of developing a new type of locomotive. It can be appreciated, however, that there are several basic factors as yet unevaluated, which cannot be figured on a slide rule or determined in the laboratory. The answers can

(*Continued on page* 43)

What Can Be Done About THE 40-HOUR WEEK?

— As a President Sees It

The constant climb in wage levels has made mechanization essential and increased productivity of labor mandatory

By G. METZMAN
President, New York Central System

The need for progress always is great, but the necessity of instituting the 40-hour week on September 1 for all non-operating employees—totaling nearly a million people on the nation's railroads—has made the production of much greater efficiencies imperative to our very survival as an industry.

This shortened work week, resulting from the recommendations of a presidential emergency board, was inaugurated in most other industries at a time when few employees were working more than 40 hours a week. It also was introduced gradually—with a 44-hour week the first year, a 42-hour week the next year, and then a 40-hour week the following year. In sharp contrast, the railroads are required to place the 40-hour week in effect in a single step.

Including the seven cents an hour raise effective as of last October 1, the 40-hour week will represent an increase in the basic day rate of shop mechanics, for example, of approximately 25 per cent in less than a year. This is so drastic that it is little wonder that one railroad labor leader* proclaimed this "one of the most substantial gains and one of the greatest victories ever won by the railway employes," or that a railroad labor publication† described this as "one of the most sweeping triumphs in the history of organized labor."

Worse yet, the change to the 40-hour week, with the burden of additional employment that it imposes, must be made in a period when we already are feeling the disturbing impact of declining business. Thus we all are faced—little more than two months hence—with one of the greatest emergencies in the entire history of railroads.

I have stated the immensity of this problem, not so that we would feel sorry for ourselves, but so that we would be freshly reminded of the challenge with which we are faced, of the problems which we must lick.

First of all, we are going to have to *think*. We are going to have to do more constructive thinking, and in a shorter period of time, than we ever have done before. This thinking must be done—whether it requires shorter lunch hours, or longer hours at the office, or whether it is done at home.

Secondly, we are going to have to follow up this thinking with intelligent action, carried out quickly.

We must review, with a critical eye, every procedure, every operation—regardless of how long we have done it that way. "Because something has been done in a particular way for 15 or 20 years is a pretty certain sign that it is being done the wrong way." We must keep up to the minute with all progressive developments which might possibly be of use to us. We cannot afford the luxury of permitting the habits and traditions of past decades to stretch forth, like a dead hand, and impair the success of the present and the future.

We must solicit ideas from the people in our departments as to how new efficiencies can be achieved, and keep after them for such suggestions, thus getting the benefit of their brains as well as of our own.

We must likewise resurrect and review with completely open minds any suggestions of this type which may have been rejected or side tracked in the past for a variety of reasons. The ideas which were passed up when we were preoccupied with the necessity of moving traffic at any cost must be considered anew—in the light of today's need for better efficiencies; in the light of today's higher wage levels; and in the light of today's employment markets

It is particularly important to salvage the *old* new ideas, because the constant climb in wage levels has made mechanization more and more essential, so that new machinery or new procedures which would not have been economical a decade ago—or even a few years ago—may now be vital in the interest of efficient operation.

But while we are thinking in terms of new machinery, we likewise must think seriously of how to get more output from the shop equipment we already have. Despite constant efforts, I doubt if any of us has reached the ultimate in that direction. Inasmuch as the production of more output from our present equipment involves no new expenditures, and no long waits for new machinery, this approach promises one of the highest potential returns on the investment of time and effort.

This article is adapted from an address before the Association of American Railroads' Mechanical Division Meeting at Chicago June 27.
*George M. Harrison, grand president of the Brotherhood of Railway Clerks.
† "Labor"

I realize full well that this is easier said than done, but I likewise know that it can—and must—be done.

Too Much Supervision?

We must study whether we have the proper number of supervisors. In some cases, it may be desirable to dispense with some. Probably no department ever feels that it has too many supervisors, but here is another place where we should take that fresh look that I have been talking about. There comes a point in any organization where too much supervision means that supervisors spend too much time writing memorandums to one another, making needless telephone calls to one another, and the like, with no more productive work being accomplished in the aggregate, and possibly even less. We must strike the correct balance between too much supervision and too little supervision.

In some other situations, it may even be desirable to add supervision to see that we are getting a full day's work for a full day's pay, and to see that the work that we are getting is productive work.

In our search for a solution to the thousand and one new problems which will confront the industry on next September 1, we shall necessarily depend to a great extent upon our supervisors—those shock troops of the railroad industry who are on the firing line, so to speak. The need for good supervisors will be more important than ever, and by good supervisors, I mean leaders, not drivers; thinkers, not mental drones. We shall need men who know their jobs and know how to teach others. Men who recognize good performance when they see it and men who think and have ideas.

If there be a way to accomplish in 40 hours what we now do in 48, that way must be found. There is an easier, better and quicker way to do most everything, and now as never before, we must seek those easier, better, quicker ways and methods. I realize full well that no supervisor can do all of the thinking for his people, but at least he can encourage them and by precept and example teach them to think for themselves.

We should make certain that we have a sufficient number of group meetings of all our key people to plan for and make certain that on September 1 there will be teamwork in all ranks.

'Phone—Don't Write!

Every organization, unfortunately, has its proportion of people who are affiliated with "dictation disease"; who would rather dictate a memorandum than make a simple phone call, or a quick visit to someone's office in the same building. In making the best use of time a telephone call, or an office visit, often is much more efficient than a memorandum, in that it reduces the possibility of the misunderstandings which too frequently produce ruffled feelings and a series of memorandums, and because it also saves typing and filing efforts which are becoming increasingly expensive, and even luxurious.

We must cut across departmental lines more and more, in the realization that everybody is working for the *railroad*, and not for a single department. I refer to expenditures of money or mental effort by one department which will result in profitable savings in the financial accounts of an entirely different department. One example would be a mechanical department expenditure which would reduce losses to lading, and which would result in savings technically for the claim department, but actually for the benefit of the railroad as a whole. Statistics show that more than five per cent of all freight claim payments are clearly due to the defective or unfit condition of the car, and that a large number of other claims likewise result from mechanical failures of one type or another. It is to overlapping matters such as these—involving many millions of dollars annually on the nation's railroads—that our departments must apply broader perspective.

And now, one of the most important things of all: We must utilize every modern supervisory technique—and there are literally scores of them available—in educating our employees to the necessity of doing a good day's work, every day, and we must personally see that they actually do this. In the hearings which resulted in the presidential emergency board's findings for a 40-hour week with 48-hour pay, the unions' national representatives made much of the argument that through working fewer hours, employees would be fresher and thus would produce more work per hour. Our efforts to cope with the 40-hour week problem can succeed only if our employees respond to the obligation to do more and better work. With all the persuasiveness at our command, we must appeal to the local union representatives to back us up, thus backing up the greater productivity promises of the national leaders. Hiding behind the protective cloak of seniority, a few employees may not be impressed because their own job security may not be immediately at stake, but given the active cooperation of the employee committees, I believe the great majority of employees can be impressed with the serious problem which is almost upon us. And even those employees with high seniority ratings can be made to remember that regardless of their job protection, any company which is in dire financial straits cannot possibly provide satisfactory working conditions.

Other departments are working, and working hard, on the problem of increasing revenues, but these are a few of the things which we must do in our mechanical departments to obtain the maximum value from the moneys paid out.

This is a big job; indeed, I cannot recall when we ever have faced a greater job in such a short period of time. I am confident that the mere presence of a hard task will not make us falter, but rather, will increase our determination to succeed. It has been said that "we would accomplish many more things if we did not think of them as impossible." We have accomplished the seemingly impossible before, and I have faith that in this emergency, just as in those of the past, railroad men will demonstrate once more the stuff of which they are made.

—In Maintenance-of-Way Operations

Five steps are outlined for increasing efficiency to compensate for the man-hour loss that will occur when the five-day working period goes into effect

Based on a report made by the chief engineer of a large railroad to its management, this article represents a highly realistic approach to the problem presented by the impending five-day week insofar as it applies to the maintenance-of-way forces. Because there are wide variations in conditions and practices between railroads it is recognized that the recommendations contained in the report are not necessarily applicable to other lines. On the other hand it is interesting to note that they are based on principles that are already generally accepted and involve no departure, except possibly in degree, from practices now in use on most roads.—*Editor.*

Looking ahead to September 1, when the maintenance-of-way forces begin working a 5-day, 40-hr. week, it will be necessary to put into effect a number of new policies in this department in order to continue the maintenance of the tracks and structures to the present standards without greatly increased costs. In such matters the natural tendency is to defer action in the hope that the situation will adjust itself, but a careful study of the 40-hr. week is certain to lead to the conclusion that the most economical course is to evaluate its problems in advance and to anticipate the steps necessary to achieve the best solution.

The recommendation is made that present practices or policies be modified or changed in five important respects. One of the most important changes contemplated is an increase in the amount of supervision over the track forces. It is reasoned that the result, due to the gangs keeping more constantly at work on essential jobs, will be a substantial increase in the output per man-hour—an increase that will more than compensate for the cost of the additional supervision.

The plan is to shorten the districts of the individual roadmasters so each of them can cover his territory completely in two days, thereby permitting him to exercise close supervision over the section gangs. This plan should result in saving most of the time lost by the section foremen in patrolling track, and should make it possible for them to work each day at specified locations. If work on a particular section is not going forward properly the roadmaster will be in a better position to detect the difficulty and give the gang the necessary attention.

To provide the contemplated additional supervision one-half again as many roadmasters' districts will be required. It would be desirable to obtain authority to employ these men as assistant roadmasters, with the intention of carrying them under this title until the latter part of August, at which time they would be promoted to roadmasters and assigned regular and permanent districts. As the organization is set up today each division has four roadmasters and one assistant roadmaster. After September 1, when the assistant roadmasters have been promoted to roadmasters, there would be six roadmasters and one assistant on each division. This would mean an increase of about fifty per cent in the number of roadmasters, with no change in the present number of assistants.

The additional roadmasters on the rolls after September 1 would require a total monthly outlay for salaries of $5,000. But as a result of the increased output obtained because of the closer supervision that will be possible it is estimated that each of the additional roadmasters will save from ten to twenty men per district. The increased output directly attributable to all of these additional roadmasters will be equivalent to the output of about 150 additional men. In other words, for an expenditure of $5,000 per month for additional supervision, 150 men can be saved which, at a monthly rate of $200 per man, would amount to a total of $30,000 per month for labor. These 150 men are approximately one half the additional men that would be needed to make up the man-hour loss sustained when the 40-hr. week goes into effect.

Another important step that is recommended is the purchase of additional labor-saving tools and equipment (as shown in the accompanying table, which gives the cost of each unit and the estimated annual saving that would result from its use). It must be pointed out that the annual savings shown in the table for machines used in laying rail out-of-face or for surfacing track will not be realized if such work is not undertaken. For instance, the annual saving of $19,000 shown for a 12-tool electric tie-tamping outfit would be realized only if the outfit is used continuously for the entire year. The same is true for the other machines included in the list. The table indicates that purchase of the additional machines recommended could result in total estimated savings of approximately $300,000 annually for track work alone. Converted into section labor this figure represents the equivalent of about 150 section men.

The third recommended change in practice is to lengthen the track sections where it is possible to do so and where savings can be effected. While the recommendations of half of the divisions are that the

present section limits be retained, other divisions recommended that certain sections be extended. Probably the plans developed by these latter divisions are workable and may produce satisfactory results. However, an extensive program for lengthening sections should not be undertaken at this time. Where it is feasible to eliminate sections and to lengthen others, this should be done gradually, probably commencing during the early part of next year. If the lengthening of sections is started it should begin at the more promising locations and then be continued only to the extent that it proves practical and economical.

Higher Construction Standards

The fourth recommendation is that types of construction be employed requiring the least application of labor for maintenance. As applied to the track this would mean the use of crushed stone ballast on the main line instead of pit-run gravel, the closer spacing of the ties where indicated, and the driving of shoulder poles or grouting where necessary to stabilize the roadbed. When certain types of ballast were being purchased for 25 cents a yard and labor was costing 25 cents an hour, the type of ballast was of little concern and made little difference if it had to be replaced in three or four years. Now this material is costing approximately 60 cents a yard and soon track men will be paid $1.16 an hour for working it.

For these reasons it is difficult to see how the continued use of inferior types of ballast can be justified if better ballast can be obtained at a reasonable cost, particularly at locations where maintenance work is heavy because of the effect of heavy traffic and high-speed trains. Therefore, serious consideration should be given to strengthening the track structure, not only by using a more stable type of ballast but also by using more ties to the 39-ft. rail, especially at locations on the main line where it is necessary to use from seven to ten men on a section.

Recommendations for Additional Power Tools and Machines, with the Estimated Savings

(Assuming Continuous Use Throughout the Year)	Unit Cost	Total Cost	Estimated Annual Saving
1—12-tool electric tie tamper with tools	$20,000	$20,000	$19,000
34—4-tool electric tie tamper	2,100	71,400	81,600
56—30-cu. ft. compressors for tie tampers	770	43,120	134,400
224—Tie tamper tools	140	31,360	
12—Unit tie tampers	400	4,800	7,200
2—Spike drivers	2,250	4,500	25,400
3—Cribbers	2,250	6,750	8,352
10—Rail saws	600	6,000	5,847
10—Rail drills	225	2,250	1,849
10—Bolt tighteners	1,250	12,500	25,000
1—½-yd. dragline	16,000	16,000	4,445
12—Sets electric 180-cycle generators	500		
12 timber saws and conductors	350		
12 electric drills	120	17,800	
12 electric impact wrenches	320		
12 electric hand saws	200		
Total cost and total saving		$236,560	$313,393

The question of whether and where to go to better ballast and more ties per rail is one that can only be answered by a study that will be difficult to make. The proper thing to do is to install test sections of the improved construction at locations where high labor costs have been experienced in maintaining the track. If these labor costs are then reduced a sufficient amount to justify the added cost of the construction, then a long-range program for improving the track structure could be planned.

The higher labor costs soon to be in effect will also justify more roadbed stabilization by pressure grouting and the driving of shoulder poles. Where chronic conditions are corrected in this manner there will not only be a substantial saving in labor but there will also be a large reduction in ballast requirements. If money were available at this time for embankment stabilization the driving of thousands of poles would be justified. Also, the continuous use of a pressure-grouting gang would be justified. These operations would, of course, involve large expenditures. A gang to handle grouting work would cost $50,000 to $60,000 a year, including the materials needed. The equipment required by the gang would cost an additional $15,000.

The final recommendation is to establish a small floating gang on each roadmaster's district. Each of these gangs would be equipped with a motor truck and an outfit car that could be moved from place to place, thus keeping to a minimum the distance that the gang must travel in getting to and from work. On divisions where this has been done it has proved very satisfactory. The use of such a gang permits the number of men in the section gangs to be reduced to a minimum, allowing just enough men to operate a motor car and to carry out the ordinary run of track maintenance work, such as spot surfacing, lining, and the spotting in of new ties.

The floating gangs would be used for installing turnouts, helping the section gangs to catch up on their work, doing out-of-face surfacing, and other jobs over their respective districts that could not be handled by the small section gangs. This arrangement would also prove beneficial in emergencies, such as derailments or washouts, requiring that men be assembled and transported to the scene of trouble quickly. This advantage would be particularly noticeable if, under the five-day week, an emergency should arise on Saturday or Sunday. In some instances it may be necessary to work the floating gangs on Saturday, either on a staggered or an overtime basis.

Expects Higher Class of Labor

All of the divisions are of the opinion that sufficient labor can be saved from their section requirements to fill out the floating gangs and to justify purchase of the trucks. There is no question but that these gangs will be more versatile and produce more work than the same number of men employed on the sections.

In addition to the various steps outlined above it will be necessary to increase the production of the men over and above that which will be obtained as a result of additional mechanization and closer supervision. One way that this can be done is to employ a better class of labor. In view of the higher hourly rates that will be in effect it should not be difficult to attract high-grade workers; this should be made a definite objective and not left to chance. The opinion of the division engineers is that the workmen are now functioning at about 75 to 80 per cent of their pre-war efficiency. By various means it should be possible to effect an increase of 10 to 15 per cent in the efficiency of the men within the near future, and eventually to raise it to the level that prevailed before the war.

All divisions are in agreement that there need be no change in the number of bridge and building gangs when the five-day week goes into effect. By further mechanizing these gangs they will be able to do the same amount of work in five days that is now being done in six. About 30 per cent of the bridge and building outfits are not mechanized and others will need additional tools and equipment. For an expenditure of $25,000 to $30,000 the mechanization of these gangs can be completed, except for the purchase of additional trucks. There are some bridge and building gangs that should be provided with trucks during the next several years, but there are a considerable number of other gangs that cannot operate to justify the cost of this equipment. It is not recommended that a wholesale program of buying trucks for the bridge and building forces be undertaken at this time. Rather, we should continue with the present program, placing trucks with outfits where their use is found to be economically justified.

—In Mechanical Departments

Individual job analysis, increased mechanization, use of improved repair parts and materials, and more careful scheduling of all maintenance operations are essential

By J. E. GOODWIN
Vice-President and Executive Assistant to President
Chicago & North Western

On September first, which is quite aptly referred to as "F" Day, the greatest revolution in operating practices, wage rates and methods of serving the public will of necessity be inaugurated by the railroad industry with the establishment of the 40-hour 5-day basic work week for the so-called non-operating employees.

If the railway industry is to survive this body blow and at the same time continue the tradition of service to the public at minimum cost, all of us must exercise every bit of ingenuity we possess to get the job done at a minimum increase in cost. In most cases, traditions and past practices will have to be thrown out the window.

If we are to continue to do our work in the same manner as in the past, the effect on the industry will be the same as a 20 per cent increase in wage costs. The alternative is to run the railroads without materially increasing the number of employees. There is only one practical way to approach the problem and that is through a complete analysis of every job, every piece of work and every service offered to the public. In each case we must ask ourselves whether the particular job or service is essential to the performance of an efficient and satisfactory transportation operation. If the job is essential, then we must find more economical ways and means of getting it done.

People who are not familiar with railroad operations are inclined to ask "Why should the railroads complain—other industries have the 40-hour week?"

In the first place, the railway industry is not like any other industry. You can shut down a production line Friday night and start it again Monday morning, but railroading is a 24-hour day, 7-day week operation.

An address before A.A.R. Mechanical Division annual meeting at Chicago, June 28.

It is true that certain activities, such as accounting and back shop work, can be postponed or shut down for a two-day holiday, but not the actual movement of trains, the dispatching of engines from the roundhouse, or the inspecting of cars in the train yards. There has been a lot of talk about the fact that only the non-operating employees are involved and, therefore, the industry has nothing to worry about in the operation of trains. We in the railroad business know very well, however, that the car inspectors who make the train yard inspection, the mechanics, hostlers and helpers who service the locomotives at the roundhouse, the supply men who service the caboose, the yard clerks who check the train consist and line up the bills, the levermen who manipulate retarders, interlocking plants and switches, the telegraphers and train dispatchers who watch the train movements between terminals, are all just as important and as necessary as the yard crews who make up the trains, or the road crews who handle them to the next terminal.

Railway Ruling Drastic

Probably the most misunderstood part of the 40-hour week is that the public does not generally realize that no industry in any way comparable to the railroads has had to apply such a drastic agreement as that which was handed down to us and, further, that no industry, comparable or otherwise, has had a reduced work week applied with the terrific economic impact that the 40-hour week brings to our industry.

The Fair Labor Standards Act established the 40-hour week in most industries at a time of widespread unemployment and at that time few industrial workers were actually employed in excess of 40 hours a week. For example, the steel workers were actually working 33.8 hours a week. A further important difference is that the 40-hour week was established on a gradual basis—the first step was to reduce the work week to 44 hr.; a year later to 42 hr.; and the following year to 40 hr. As against this orderly and gradual approach, about one million railroad employees will be placed on a 40-hour week in one grand blow—and with no reduction in pay.

The principle of the 40-hour week was to spread employment; however, it is being applied to the railroad industry at a time of relatively high employment —in fact, a time of shortage of competent and qualified railroad employees of some classes.

In 1948, all of the approximately one million employees in the non-operating group worked at least 5½ days a week and were paid on the basis of at least 6 days a week. It is evident, therefore, that the compression of the work week from 48 to 40 hr. is not something that will take care of itself automatically—it can only be applied after serious and detailed studies by railroad officers and supervisors.

In the practical application of this award we have a choice of two methods of approach; the first is to compress the work load into five days by getting more work done in less time through increased efficiency, including mechanization, and the hiring of additional employees on a five-day basis; the second approach would be to provide relief employees for the sixth and seventh days.

Of the one million so-called non-operating employees, over 28 per cent are on seven-day positions which are necessary for the continuous operation of the railroad. It is obvious that unless you devise some radical changes in methods of doing this work these positions will still be necessary and you will be required to more than double the present number of relief assignments. The greater number of seven-day positions which there are on a railroad, the greater will be the cost of the 40-hour work week.

It has been estimated that if we go along as we have in the past with present work methods it will require more than 200,000 additional employees and will cost the railroads close to $510 million a year—which would be the same result as though an increase of 23½ cents an hour had been granted to all non-operating employees.

Under most shop crafts' agreements, the railroads have been required to pay time and one-half for Sunday work as such. It has been the general practice to restrict Sunday operations to the bare essentials and it will now be necessary to so consider Saturday or some other relief day.

However, under the 40-hour week award the crafts lost the payment of time and one-half for Sunday work as such. The mechanical departments now have an excellent opportunity, through scheduling and planning, to set up relief assignments and perform on a straight-time basis the work previously done on Sunday at penalty rates. In this way they can assist materially in reducing the impact of the cost of the 40-hour work week.

More Mechanization Needed

Mechanical department officers must seek ways and means further to mechanize operations, and no opportunity should be lost to bring about economies through such procedure in each case where studies indicate a worth-while saving can be realized by substituting modern machines for antiquated machines or hand labor methods. They must be on the alert also for better parts and better material which will extend the time between repairs to equipment. They will have to work closely with the operating department in scheduling repairs to freight and passenger train equipment. The operating officers will be up against nearly impossible odds in their efforts to maintain a high standard of service and still operate economically under the 40-hour basic work week. They will undoubtedly make every effort to reduce yard and transfer assignments, as well as freight and passenger train service, particularly on Saturdays and Sundays, all of which will affect mechanical department operations to the extent that such action will reduce the number of locomotives

to be dispatched and the number of cars to be handled, inspected or repaired in yards on week ends. These items will of course have to be considered in setting up force requirements.

The application of the 40-hour basic work week at this time is particularly inopportune as it materially increases operating expenses at a time when revenues are down considerably because of the slump in general business activity. Neither carloadings nor passenger travel have come up to expectations thus far in 1949, and the tempo of industrial activity in the second half will determine, for a good many roads, whether they will have a dollar left after meeting their obligations for the year. It is indeed a sad commentary on our national transportation policy if the railroad industry which served the needs of the country so adequately and honorably in time of war is not going to be permitted to make an honest dollar in time of peace.

Some Things to Be Done

Our salvation, as I see it, must come through reverting to the performance only of that class of transportation service for which we hold the inherent advantages and by that I mean the mass transportation of persons and property. Since the rate structure has about reached the saturation point, we must trim costs through elimination of the expensive frills of passenger service; we must eliminate unprofitable secondary and branch-line passenger service; we must close small country stations which do not produce enough revenue to justify the expense of operating the station; and to accomplish these things we must handle each case vigorously with the Interstate Commerce Commission or the state commission having jurisdiction.

These commissions and other public bodies concerned will have to be convinced that the railroads can no longer afford to provide costly service under the guise of public convenience or necessity when in actuality the revenues produced by such services clearly indicate an operating loss and no real necessity for the service. We can no longer afford to take 35 per cent of freight earnings, as was the case in 1948, to make up losses incurred through the operation of passenger train service. We want to offer all of the passenger service which can be justified by the patronage and the revenues which such service will produce, but it certainly is not good business to operate passenger trains perhaps 25 per cent occupied and take the resulting loss merely because we operated the same train for a number of years past.

Communication . . .

Questions Present Maintenance Costs

To the Editor:

In the present policies and practices followed in maintaining railroad tracks, has something or anything been overlooked that is of major importance? If the answer given to this question is "No," then what is the explanation for the relatively huge expenditures made for smoothing, surfacing or tamping track at times other than when it is raised out-of-face when ballasting or making tie renewals?

How closely does top management examine the maintenance charge for surfacing or smoothing? Are many evils hidden behind this charge? Is it accepted as a necessary evil, and, if so, why? Does the name "maintenance" have a direct bearing on our methods and thinking, resulting in a policy that calls for more repair work than would be necessary if our thoughts and actions were directed along more constructive lines, with more emphasis on assembly-line production?

Are we to say it can't be done, when it has been done? Policies have been developed that lead to better track with many economies over present practices, with a favorable effect on the overall cost ratio. To adopt and follow these policies is not easy in the beginning, but as time goes by the way becomes smoother and smoother, as well as the track. The route lies in the adoption of a new policy and the education of the entire organization in that policy. It is not sufficient merely to tell the supervision about the policy or to ask whether it is being followed. Careful planning, carried to a conclusion, is required.

Perhaps the new approach could be termed a better classification of thought with the objective of developing a better property, while at the same time effecting large savings. Such an approach would afford a way to counter, or more than counter, the increased cost of the 40-hr. week in the maintenance-of-way department.

Track Man

New Book . . .

RAILROADS OF TODAY, by S. Kip Farrington, Jr. 306 pages, illustrations. 5½ in. by 8½ in. Bound in cloth. Published by Coward-McCann, Inc., 2 W. 45th st., New York 19. $6.

Mr. Farrington, in this, his latest book on modern railroading, describes some of the new trains and new operations that are now being placed in service by the railroads. The new trains include the New York Central's "Twentieth Century Limited," the Atchison, Topeka & Santa Fe's "Super-Chief," the Missouri Pacific's "Eagles," the Great Northern's "Empire Builders," the Norfolk & Western's "Powhatan Arrow," the Baltimore & Ohio's "Cincinnatian," and the Chicago, Rock Island & Pacific's "Rockets." Among operations covered are centralized traffic control, motor car signals, retarder hump yards, signal devices, track inspection cars, the Union Pacific's roller-bearing stock cars, the B. & O.'s "Sentinel" freight service and the Diesel valve pilot. There are 72 pages of striking photographs which illustrate these various trains and operations.

Railroads of Today is generally similar in style, format and technique to Mr. Farrington's earlier books, such as Railroads at War, Railroading from the Rear End, and Railroading from the Head End.

1949 Railroad Fair Aims to Give 'Em A Good Time

"Encore" version of Chicago Lakefront spectacle opened on June 25 with entertainment-plus as its objective

The 1949 edition of the Railroad Fair—incorporating a number of new entertainment features, plus remodeled and otherwise greatly improved exhibits from last year's show—was given an auspicious send-off by a first-day throng of 19,000 paying customers at its opening in Chicago on June 25. Intermittent showers which threatened to spoil the occasion ceased as opening ceremonies got underway, leaving cool fair weather to prevail throughout the day. To signal the Fair's beginning, the United States and Fairflags were raised, respectively, by John D. Farrington, president of the Chicago, Rock Island & Pacific, and Wilson McCarthy, president of the Denver & Rio Grande Western.

Hailed in 1948 as the most heavily attended attraction on the country's summer vacation program, the reopened exhibition celebrating railroad progress has been keyed to top its previous attendance record of 2,500,813 paid admissions. It will continue for 100 days, through October 2.

The Fair management, the 39 sponsoring railroads and hundreds of supporting railway supply firms have been alert to inject even greater drawing power into their 1949 show. For example, customers may watch graceful skaters perform in a mirthful "Ice Frolics" and water ski artists go through their daring antics, all against the natural backdrop of colorful Lake Michigan.

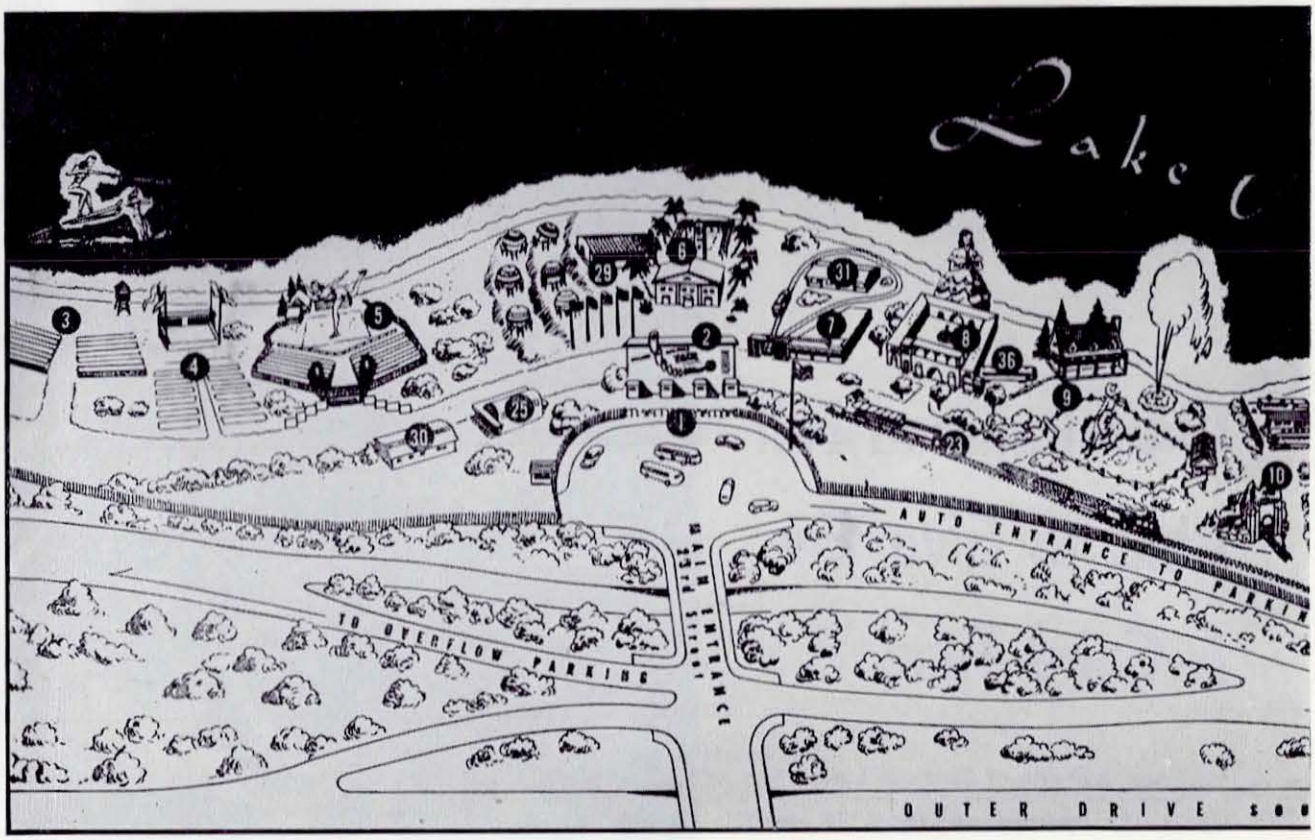
A meticulously reproduced "gold rush" town has been added to the 50-acre mile-long show area, as has been a precise replica of the entrance to the Moffat Tunnel and an operating cable car taken right off the streets of San Francisco.

The new displays are, of course, in addition to those attractions which won the plaudits of public and press last year. Returned—expanded and enlivened—is the "Wheels A-Rolling" pageant (described on another page in this issue), track exhibits of both old and modern railroad rolling stock, many individual railroad exhibits into which have been woven a gala holiday theme, and displays of suppliers of railroad equipment. All repeat exhibits have been changed and/or revised and supplemented for greater entertainment appeal.

The Fair opening was heralded on its eve by a parade through Chicago's "Loop" of costumed actors and actresses, beauty queens, replicas of famous old locomotives, soldiers and old-time automobiles, bicycles and horse-drawn vehicles. The gates opened officially at 10 a.m. on June 25, although invited groups had previously attended previews of some attractions.

The fairground has been refurbished throughout; there are many new brightly painted buildings; and the tents of last year have been replaced by semi-permanent structures. Flags, railroad banners and Fair insignia wave from atop poles and buildings, indicative of the gay and carefree air which pervades the second-year extravaganza.

General improvement of facilities includes expansion



LAYOUT OF THE FAIR
(1) Main entrance. (2) Administration building. (3) Water "Thrill Show." (4) Special events arena. (5) "Ice Frolics." (6) "Florida in Chicago" and replica of Bok Singing Tower—Chicago & Eastern Illinois. (7) San Francisco cable car and "Golden Gate" theater—Western Pacific. (8) Old French quarter and New Orleans exhibit—Illinois Central. (9) Rodeo show, dude ranch, "Old Faithful" geyser—Chicago, Burlington & Quincy, Great Northern and Northern Pacific. (10) Moffat Tunnel and theater—Denver & Rio Grande Western. (11) Rocket Village—Chicago, Rock Island & Pacific. (12) Santa Fe Indian village—Atchison, Topeka & Santa Fe. (13) Vitarama Hall—joint exposition of nine Eastern railroads. (14) "Wheels a-Rolling" theater. (15) Paul Bunyan exhibit—Chicago & North West-

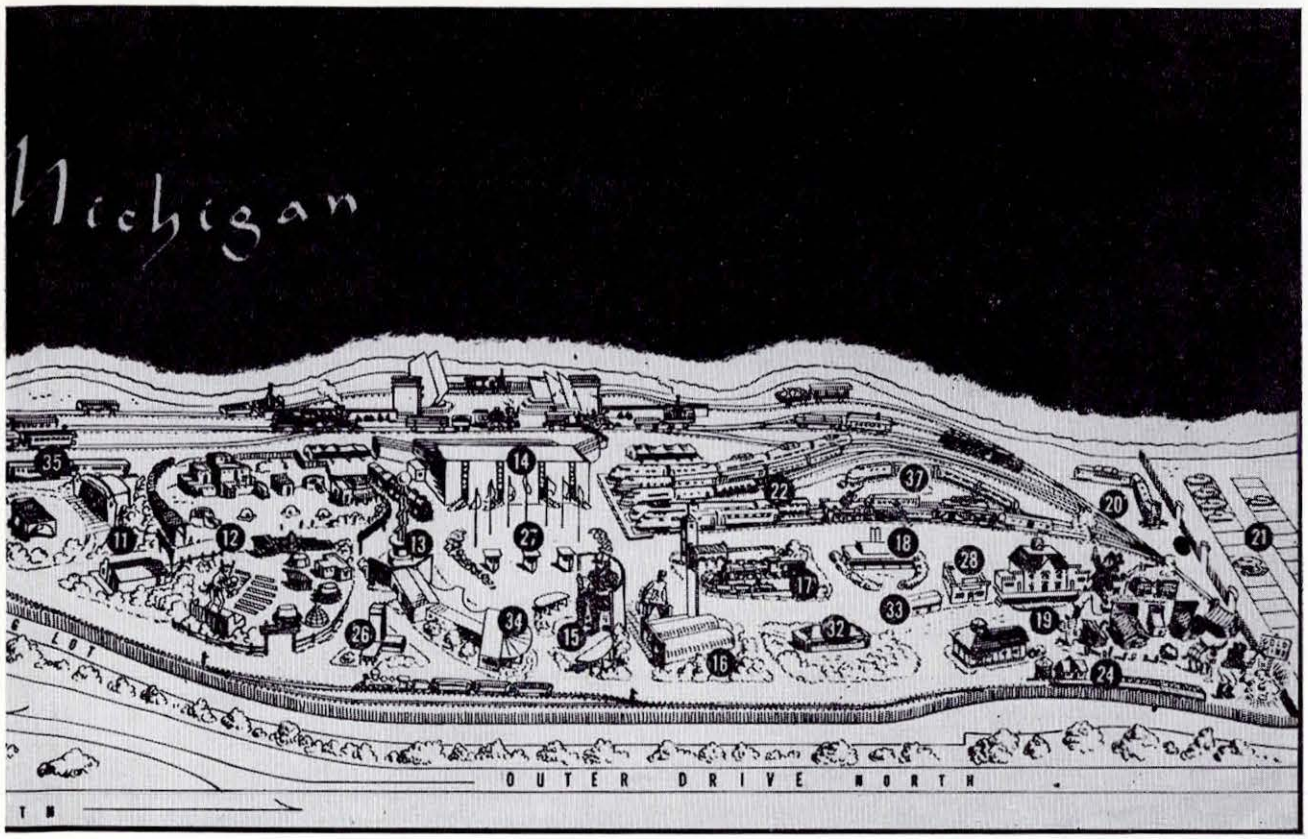
of rest room accommodations, addition of benches for short rests, increase in the number of restaurants to five and dining cars serving meals to four, addition and enlargement of soft drink and sandwich stands, widening and black-topping of walks, and erection of covered ways as protection against sun and sudden showers.

"Rip-roaring" Gold Gulch

A new addition to the 1949 Fair—a project of the Fair Corporation—is a rebuilt 19th century mining community aptly named Gold Gulch and described as a "rip-roaring, wild and wooly, frontier town." Gold Gulch re-enacts, in almost every detail, all the thrill and color of life in the Wild West, when a man's "shooting iron" was his best friend and when the railroads were pushing toward the Pacific and up narrow valleys to the mines.

The rebuilt boom town gives its visitors the thrill of stalking about in surroundings like those once familiar to Billy the Kid, Jesse James and the other early western "bad men." While slight concessions are made to present day customs, the little town is a true representation of the raw life of the Sixties and Seventies, from its action-filled Main street and wooden sidewalks to the bearded, gun-toting "oldtimers" working its gold mine and filling its noisy shacks and buildings.

The reproduced community, located at the south end of the exposition grounds, consists of such establishments as a Grubstake eating place, which is a "rough and ready" outfit serving chow in surroundings like those in which the old Westerners thrived; the "Box Butte County" court house and jail, where periodic trials of visiting notables are held; the newspaper office of the Gold Gulch "Clarion"; a Chinese laundry with a pig-tailed Oriental on the job; a shooting range for "drug store" cowboys; a gambling den (a sign in the window reads, "Closed for proprietor's hanging!"); the assay and land office for filing of new mining claims; a barber shop with ancient plush chairs and brass cuspidors; a Wells Fargo corral for stage coaches and pony riders; post office; and a barred and guarded bank featuring an open counter



ern. (16) Pullman Company's display. (17) Union Pacific exhibit. (18) Shelter Building. (19) Gold Gulch, old gold-rush mining town. (20) Budd Company's newest streamline cars. (21) Main parking lot. (22) Track exhibit. (23) "Deadwood," north terminal of Deadwood Central narrow-gage line. (24) Gold Gulch narrow gage station. (25) Santa Fe movie theater. (26) Travel building. (27) Main plaza. (28) Gold Gulch, U. S. post office. (29) Harbor View terrace restaurant. (30) North Restaurant. (31) Cable Car Inn. (32) Railhead Inn. (33) Leo's Grubstake Restaurant. (34) Eastern Railroads' Restaurant. (35) Rock Island's "Fiesta" and 1880 "Palace" dining cars. (36) I. C.'s "Cafe St. Louis," all-electric dining car. (37) Chesapeake & Ohio "Chessie Club" dining and tavern cars

holding old scales once used to weigh raw gold, and walls decorated with reward signs, photographs and stage coach schedules.

Florida Water "Thrill" Show

The extreme north end of the grounds is the scene of a one-hour Cypress Gardens Water Thrill Show, which is an independent production. It features 40 ski maids and national champions in intricate high-speed water tricks, jumps and precision routines. The group's appearance at the Fair marks the first time anywhere in this country that is has performed outside its native Florida. Seats for 4,700 persons are available at each of the four daily performances, at 1; 3:45; 7:30 and 9 p.m. The general admission price is 60 cents, with reserved seats at $1.20.

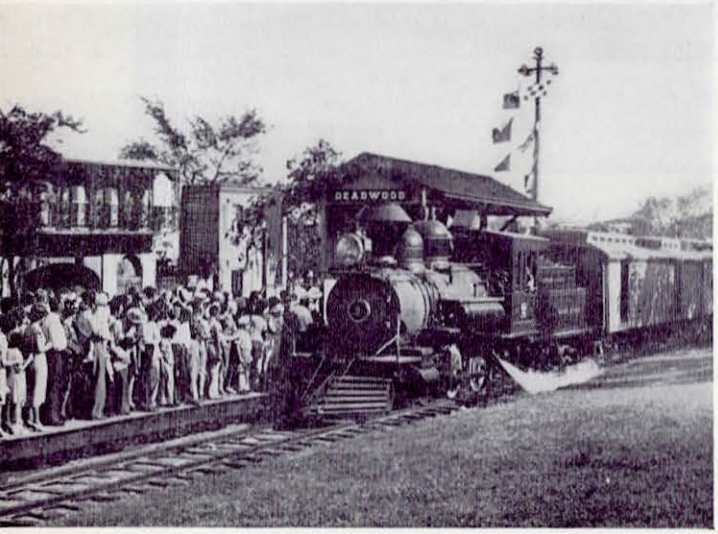
Another new feature, also independently operated, is a children's theatre, with puppet acts, trick dogs and a ventriloquist providing the entertainment. A 40 min. show is given six times daily at a charge of 25 cents for children and 40 cents for adults.

The Deadwood Central narrow-gage, which last year had the enviable earning capacity of $40 a train mile, now has a second train—furnished by the Rio Grande. Nearly a million riders traversed the fairgrounds in 1948 aboard the Burlington's historic train, "Chief Crazy Horse," of the Eighties' gold rush period. As previously, the fare is 10 cents. Competing with the narrow-gage trains is a miniature steam locomotive, which hauls passengers over a 900-ft. run in six brightly painted cars, each with a capacity of eight persons.

With a war invasion craft as a launching base, spectacular aerial fireworks signal the end of each evening's performance of the pageant. A fiery Niagara Falls cascades over the sides of the 114-ft. war surplus LCT tank carrier, as streams of brilliant fireworks shoot into the sky. The pictorial displays feature flaming designs of old locomotives and modern streamliners and, on nights set aside to honor special railroads, their particular emblems are included.

The governors of a number of states have declared that they will attend the Fair and participate in cere-

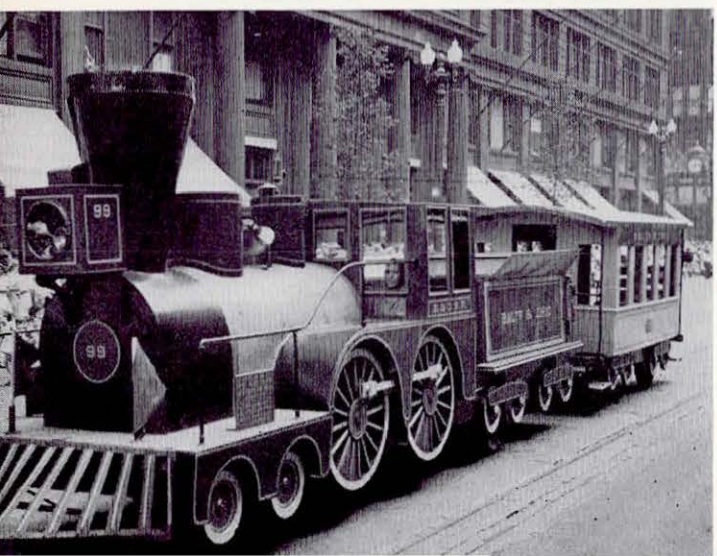
The Railroad Fair is back in business



Steam is up again on the Deadwood Central narrow-gage line

On the day before the Fair opened, an elaborate parade of floats, actors and vehicles from the Pageant entertained large crowds in Chicago's Downtown Loop

Acme Newspictures



The Fair in Brief

OFFICERS

President, Major L. R. Lohr, head of the Chicago Museum of Science & Industry

Vice-President, R. L. Williams, president of the Chicago & North Western

Treasurer, Wayne A. Johnston, president of the Illinois Central

Secretary, G. Murray Campbell, vice-president of the Baltimore & Ohio

DATES

June 25 through October 2, inclusive

LOCATION

Chicago, between 20th and 30th streets, on Lake Shore Drive

ADMISSION PRICES (tax included)

To grounds, 25 cents

To pageant, 60 cents

To water show, 60 cents

For ride on narrow-gage railroad, 10 cents

HOURS OF FAIR

10 a.m. to 10:30 p.m. daily

TIMES OF PAGEANT PRESENTATION

2 p.m., 4 p.m., 7 p.m. and 9 p.m.

PUBLIC TRANSPORTATION TO GROUNDS

Illinois Central—Board suburban train from "Loop" stations along Michigan Avenue, at Randolph, Van Buren or Twelfth streets. Detrain at 23rd street station and proceed east on 23rd to Fair.

Surface Lines—Any car line south from "Loop" (except Dearborn) will intersect with 22nd street line leading direct to Fair entrance.

HOW TO REACH CAR PARKING AREA

Enter 23rd street entrance and proceed east to large paved oval, thence south on paved road to parking lot.

monies calling attention to their respective states. Special railroad, cities and organizational days have likewise been designated.

The railroads presenting the Fair are: Atchison, Topeka & Santa Fe; Baltimore & Ohio; Boston & Maine; Chicago, Burlington & Quincy; Chesapeake & Ohio; Chicago & Eastern Illinois; Chicago Great Western; Chicago & Illinois Midland; Chicago, Indianapolis & Louisville; Chicago, Milwaukee, St. Paul & Pacific; Chicago & North Western; Colorado & Wyoming; Denver & Rio Grande Western; Duluth, Missabe & Iron Range; Elgin, Joliet & Eastern; Erie; Grand Trunk Western; Great Northern; Green Bay & Western; Gulf, Mobile & Ohio; Illinois Central; Lake Superior & Ishpeming; Maine Central; Minneapolis & St. Louis; Monongahela; New York Central; New York, Chicago & St. Louis; Norfolk Southern; Northern Pacific; Pennsylvania; Pittsburgh & West Virginia; Pullman Company; Chicago, Rock Island & Pacific; Minneapolis, St. Paul & Sault Ste. Marie; Spokane, Portland & Seattle; Texas-Mexican; Union Pacific; Wabash; and Western Pacific.

NOVEL "ICE BALLET" AMONG FEATURES SPONSORED AT FAIR BY RAILROAD SUPPLIERS

ICE SHOW COMMITTEE

Thomas Drever (chairman), American Steel Foundries
W. A. Callison, American Locomotive Company
Harold V. Engh, Pyle-National Company
A. A. Frank, Standard Railway Equipment Manufacturing Company
George Hannaway, T. J. Moss Tie Company
George B. Harrington, Chicago, Wilmington & Franklin Coal Co.
J. S. Hutchins, Ramapo Ajax Division, American Brake Shoe Company
F. A. Poor, Poor & Co.
J. H. Rodger, Oxweld Railroad Service Company
H. J. Watt, Carnegie-Illinois Steel Corporation

The manufacturers and suppliers of railroad equipment are lending strong support to the carriers' 1949 Railroad Fair with a colorful ice skating show and several individual exhibits.

The "Ice Ballet"—representing an investment of $167,000 by 237 firms—is a half-hour skating show—presented free—featuring an all-girl ensemble with musical accompaniment, plus specialty acts. It is offered six times daily on a rink containing 1,000 sq. ft. of skating space, located just north of the main entrance at 23rd street. Seats are available for 1,200 persons. Specialty acts include adagio acrobatics on skates; a 360-lb. skating comedian; a comedy skit in bird language; and a ski and skating artist formerly with the Sonia Henie Ice Show.

Individual Exhibits

In an individual exhibit the *Pullman-Standard Car Manufacturing Company* tells the advantages of traveling by rail and points out, through the use of a giant mechanical book, the progress achieved by the railroads. On display are five Plexiglass models of new types of commuter cars recently completed by the company's color and design department. Working models of three track maintenance machines—power ballaster, ballast cleaner and cribber—are on exhibit in the exhibitor's main building, while there are actual models of the ballaster and cribber in the track display at the south end of the grounds. *Happiness Tours*, a travel bureau which is exhibiting in conjunction with Pullman-Standard, is conducting weekly contests for "Miss Happiness" and awarding vacation trips for two to the winners.

Two all-stainless steel cars are the major units in the *Budd Company's* exhibit. One car is incomplete—without all of its exterior and exterior surfaces installed—so that the actual design and construction of the car can be examined in detail. The other unit is a complete passenger car equipped with every modern device for the traveler's relaxed and enjoyable ride. The latter car is changed every seven days, so that a variety of "cars of the week" can be exhibited before the Fair's closing on October 2.

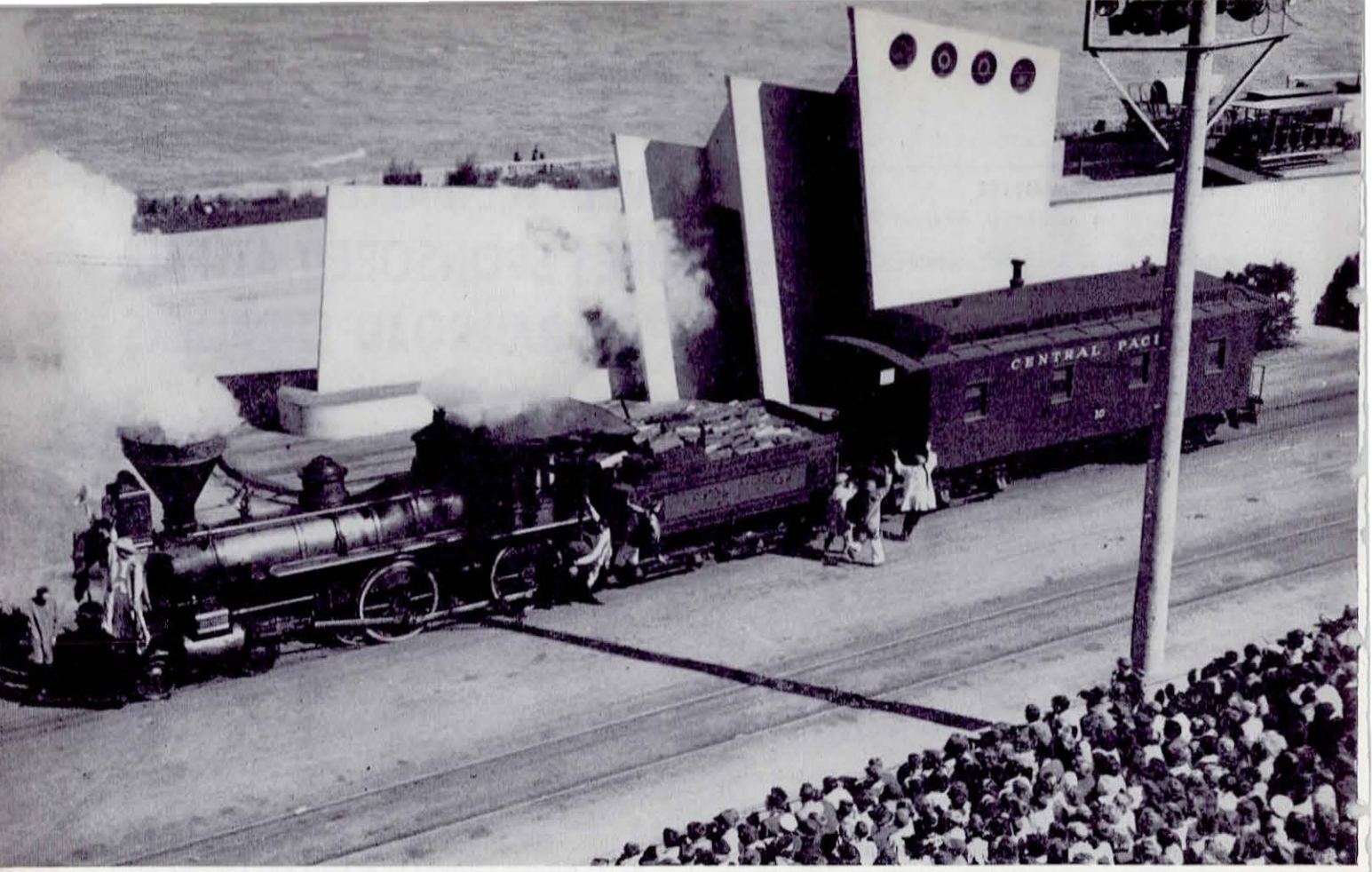
The "cut-open" car houses a series of three-dimensionally treated photographs, full-relief models and dioramas illustrating the growth of Budd as a builder of railway equipment. Moving figures symbolizing men at work add color and action to the scene. Flashing lights alternately illumine and darken a series of enlarged color transparencies showing interiors of more than 20 cars built for America's railroads. A Budd disc brake is also displayed.

Two cars built by the *General American Transportation Corporation* are on display at the track exhibit—an all-welded, aluminum tank car and the latest type of refrigerator car for transporting frozen foods. The latter houses an exhibit which illustrates, through the use of model cars, photographs and actual products, the diversified operations of the company.

A troop sleeping car which has been converted into a refrigerator car suitable for either passenger- or freight-train service is exhibited on the track display by the *Chicago Freight Car & Parts Co.* The company, which converted some 125 of the cars for the Alaska Railroad, has equipped the reefer with high speed trucks, steam lines, signal lines and all appliances necessary for freight car safety.

The "Train of Tomorrow" has been returned to the Fair by the *Electro-Motive Division* of *General Motors Corporation* and will, on July 15, be augmented by the *American Car & Foundry Co.'s* "Talgo" train. The *Pyle-National Company* is furnishing a number of its "Gyralites" for supplementary illumination of the fairgrounds, and signal installations at various points have been made by the *Western Railroad Supply Company.*

If any business is to continue and offer any reasonable incentive to investors who must finance it, some way must be found to give them a reasonable hope for a fair return upon their investment. The railroad industry represents a vast amount of capital. Some people seem to think that railroads have an unlimited supply of money tucked away and available whenever needed, and that it will always be so. Nothing could be farther from the truth. The fact is that the investment in this industry, as in others, was made with money which came from members of the public . . . who were willing to invest their savings in what seemed to be a necessary industry. If they cannot reasonably hope to get any return, they will, of course, discontinue their investment. No one can expect any industry to be operated solely for the purpose of paying for labor and materials and other operating expenses and taxes. If the time ever comes when the public does not have sufficient confidence in our industry to provide the new money needed by it, we will not be able to continue to give the public the service it needs and if that point is reached, the only alternative would seem to be nationalization of the industry, or, in other words, government ownership.
—*C. H. Buford, president, Chicago, Milwaukee, St. Paul & Pacific.*



REVISED "WHEELS A-ROLLING" PAGEANT IS AGAIN FAIR'S MAJOR SPECTACLE

Generally recognized as the most ambitious outdoor stage production in this country, the "Wheels A-Rolling" pageant of the Railroad Fair is back again, with new scenes added, others revised and many more historical vehicles crossing its mammoth stage. An additional 1,000 seats have been erected, enabling 6,000 persons to see each of the four daily performances. Some 1,200,000 persons paid to see the show in 1948.

Almost every form of transportation — from the Indian travois, the stage coach of colonial days and the tiny locomotives that marked the birth of railroading, to the streamline railroad motive power of today—are seen in action on the 450-ft. by 150-ft. stage. Three tracks stretching across the stage enable trains to move simultaneously in both directions. Employed in the presentation are 150 actors and actresses, 26 different locomotives and trains, 80 horses and other beasts of burden.

Typical of the new scenes is "Rails Across the Prairie," giving a picture of political life, as well as transportation progress, in the middle 19th century when "Tippecanoe and Tyler, too" was on the lips of the nation. Two rival political factions arrive in the swamp town that was then Chicago aboard the "Cumberland Valley Pioneer" and the "Reuben Wells," powerful trains of their day, to watch the "Pioneer," the tiny second-hand locomotive of the Galena & Chicago Union, make the first run west from Chicago. Momentarily forgetting their common interest in rail progress, the leaders engage in heated political debate on a hastily erected platform and are encircled by other passengers in a fervid torchlight parade sparked by a six-piece German band. Not until the platform is set afire and a tiny fire engine rushes to the rescue is the political rally broken up. Political differences are then forgotten as the "Pioneer" steams on stage and all climb aboard for the ride which signalled the beginning of modern commerce and the birth of Chicago as a railroad center.

Another of the new scenes, entitled "A Turn of a Century," is a riot of color and gaiety lifted from the showmanship days of "Buffalo Bill" Cody. "Buffalo Bill" himself, astride a magnificent white horse, leads a parade of cavorting circus performers across the stage to the tune of an authentic ear-piercing, smoke-belching, steam-operated calliope. The famed ring master is followed by "period piece" circus wagons drawn by prancing horses, "Sandow, the strong man," clowns,

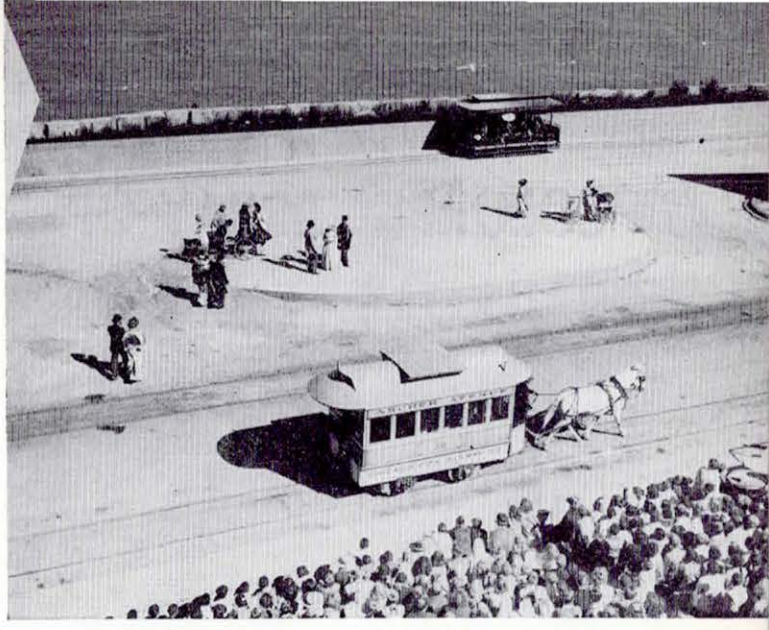
a medicine man, hoop dancers, hawkers, and Fatima girls, all giving a preview of the thrills that awaited the circus-goer of that day.

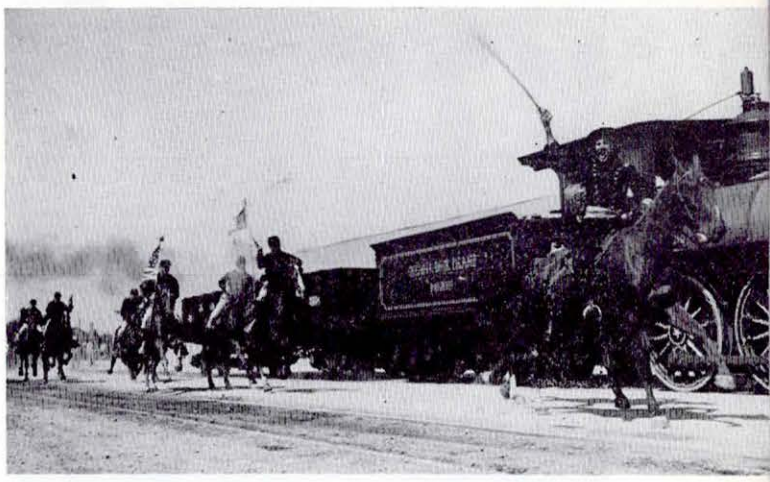
Among the rolling stock appearing in this year's production, but not included in the 1948 presentation, is the Nova Scotia "bridal" coach loaned by the Baltimore & Ohio. The quaint old coach was the first railroad car used in Canada, and is said to be the oldest railway passenger coach on the North American continent.

The Chicago, Milwaukee, St. Paul & Pacific has, for the duration of the Fair, parted with one of its electric locomotives of the type used in passenger service over the Cascade mountains. The locomotive is 76 ft. long, weighs 521,200 lb., has 24 drive wheels and, for its pageant performance, will draw current from concealed storage batteries.

The 98-year-old wood-burning locomotive, "Pioneer," of the Cumberland Valley (now Pennsylvania), treasured for its early speed records and participation in the Civil War, and a C.V. coach will also join the roster of historical vehicles in "Wheels A-Rolling." The "Pioneer" was burned by Confederate troops in October, 1862, but was later repaired. Its last revenue run was made in 1900 from Chambersburg, Pa., to Carlisle. The C.V. coach, which is coupled to the "Pioneer" in its pageant role, is a combination passenger and baggage car, with a long "veranda" extending the entire length of the baggage compartment in the forward half of the car.

Mrs. Helen Tieken Geraghty again is pageant director, assisted by Earl J. Brisgal. The presentation was adapted from a pageant play by the late Edward Hungerford.

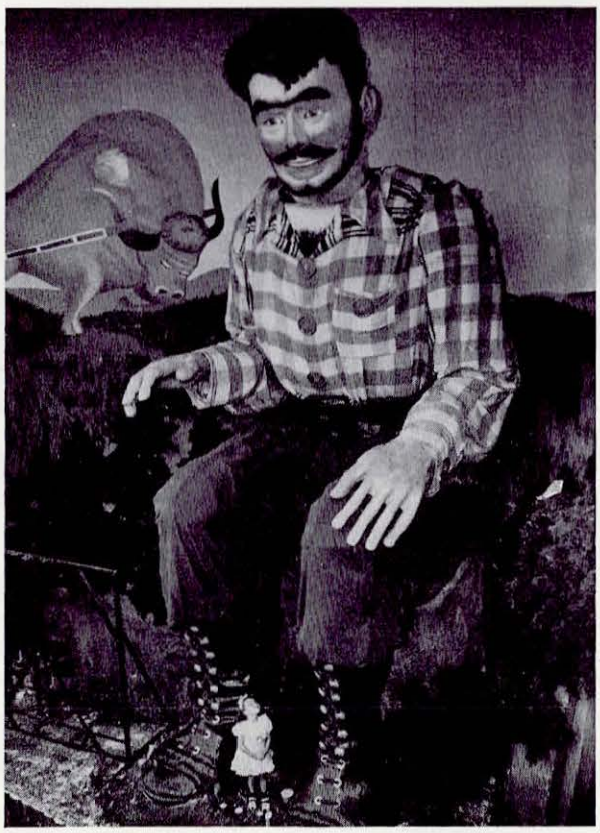




COLORFUL ARRAY OF RAILROAD EXHIBITS TO PLEASE THIS YEAR'S FAIR CUSTOMER

San Francisco cable car of Western Pacific

C. & N. W.'s Paul Bunyan, who is 35 ft. tall



An "old trouper" flare for showmanship, coupled with tireless effort, is apparent in all attractions of the exhibiting railroads at the 1949 Fair. Having elected not to rest on their triumph of 1948, the individual railroads have come up with several entirely new features and scores of fresh ideas to enliven their previously successful displays. They complement in every sense the attractions of the Fair being put on by the participating roads as a group.

Visitors will see an exact replica of the entrance to the Moffat Tunnel, which has been constructed by the *Denver & Rio Grande Western.* The tunnel leads to twin theatres, one of which shows motion pictures of the Rio Grande's role in aiding the growth of the West, while the other houses exhibits depicting the development of the country served by the railroad. In addition, the Rio Grande is furnishing a second narrow-gage train for the Deadwood Central line.

The *Western Pacific* has added another new attraction in an operating San Francisco cable car, complete with track, cable slot, rumbling cable and turntable. The car is being operated by grip men chosen at a gong-ringing contest held in San Francisco prior to the Fair's opening.

Vitarama, a system of slide projection employing five screens and a 10-lens projector, is the new highlight of the joint Eastern Railroads exhibit of the *Baltimore & Ohio; Boston & Maine; Erie; Maine Central; Chicago, Indianapolis & Louisville; New York Central; New York, Chicago & St. Louis; Pennsylvania* and *Wabash.*

The five screens, each approximately 9 ft. high by 6½ ft. wide, cover an entire wall of one of the three buildings comprising the general exhibit. A remarkable feature of the Vitarama equipment is that it can show separate pictures on each screen simultaneously, or one huge picture covering all five screens, or any combination of pictures, such as a single picture on each of two end screens and a large one covering the three center screens.

Last year's favorites back on hand at the Eastern Roads' exhibit buildings are "Genial Joe," the nine-foot giant foam-rubber robot engineman who welcomes visitors and answers questions; a model railroad consisting of a 20-ft. by 50-ft. lay-out; an information counter staffed by uniformed attendants who answer questions concerning travel to the East; and a large outdoor restaurant.

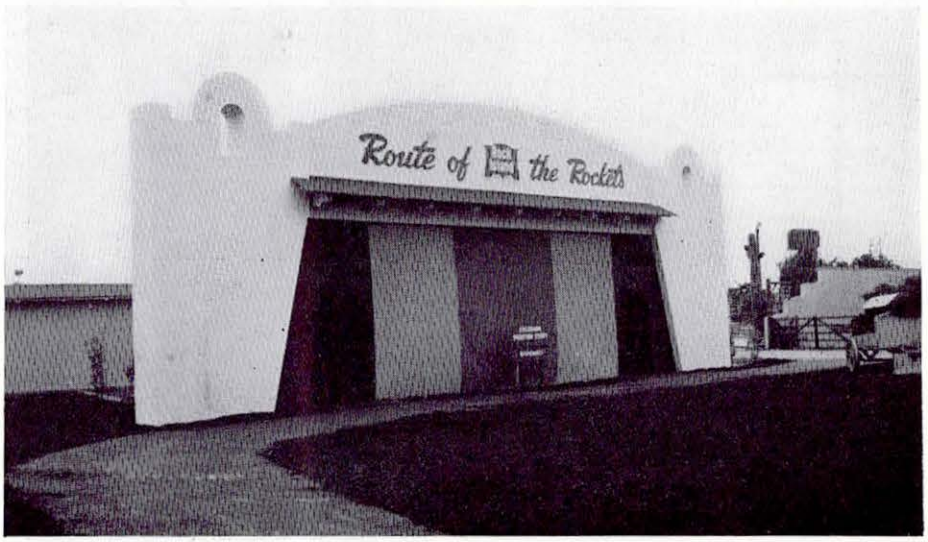
Many of the eastern roads have on display, at the outdoor track exhibit, the latest in locomotives and passenger and freight equipment. In addition, the Pennsylvania is exhibiting locomotive No. 7002, which in 1905 made the fastest locomotive run, attaining the yet-to-be-equalled speed of 127.1 miles an hour. The Wabash has placed on exhibition a replica of the "Rogers," the first train to operate in Illinois.

Also new to the Fair is the *Chicago & North Western's* giant figure of Paul Bunyan, towering two stories high and said to be the biggest animated man ever constructed. The lengendary figure can nod, shake his head, raise his arms, roll his eyes and move his lips. Working with an artist at shows eight times daily, the life-like behemoth asks members of the audience to

(*Continued on page* 42)

Pennsylvania's No. 7002, holder of the world's speed record of 127.1 m.p.h.

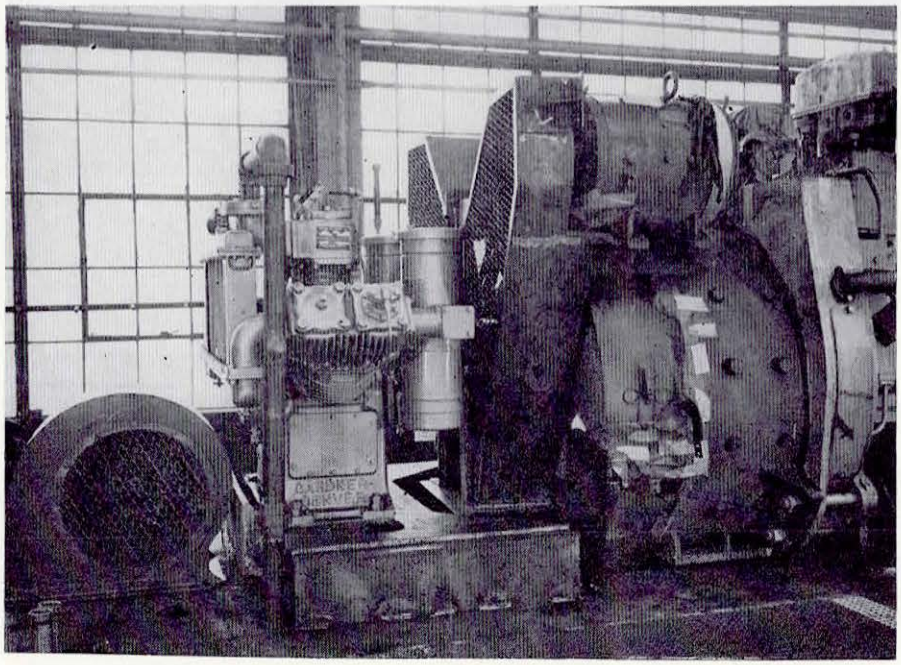
A Pullman porter does his chores as visitors watch



Semi-permanent structures have replaced tents

Nickel Plate Receives First

Switching unit, weighing 120 tons, powered by 1,000-hp. Hamilton Diesel with Westinghouse electrical equipment



Generator end of the engine. At the extreme right is the small pipe by means of which the generator fan ventilates the crank case

Lima-Hamilton Switcher

The Lima-Hamilton Corporation, Lima Locomotive Works Division, Lima, Ohio, has begun delivery of four 1,000-hp. Diesel switching locomotives to the New York, Chicago & St. Louis. The Nickel Plate order is a portion of total current orders which number 31 switchers for four different railroads and one steel mill, including 10 for the Erie and 6 for the New York Central.

The locomotives are of the B-B wheel arrangement, and have a single cab mounted on the frame which is carried on two four-wheel swivel trucks with a motor on each axle. The operator's compartment is located at the rear, with the power plant hood extending from the compartment to the front end of the locomotive.

Suitable for all kinds of hauling within its capacity, the switcher is powered by a Hamilton 9-in. by 12-in. eight-cylinder, supercharged, four-cycle vertical Diesel engine,* which provides a full 1,000 b.hp. for traction, utilizing the full capacity of the traction motors. The switcher, which weighs 120 tons in working order, has a maximum speed of 60 m.p.h.

Of conventional design, the hood of the locomotive is made of steel sheets and structural shapes, and houses the engine, generator, air compressor, traction motor blowers, radiators and fans, and all control equipment. A removable hood section over the power plant permits removal for repairs if necessary, without disturbing other equipment. Panel doors are located on each side, with hatches in the roof. Ducks for the generator fan outlet prevent recirculation of hot air under the engine hood.

The operator's insulated compartment has sliding windows on each side, and front and rear windows, also on each side, of the fixed type, with the windshield wipers on the exterior. Two electric heaters with circulating fans provide low, medium, and high heat.

Trucks for the locomotive are the side-equalized swivel type with rigid bolsters and outside friction bearings. Truck frames are one-piece steel castings, made by General Steel Castings Corporation. The pedestals are protected from wear by hardened steel liners, with pedestal caps made of forged steel, bolted in place. Steel liners on the sides and a loose liner on the bottom protect truck center plates from wear and also permit height adjustment. Side bearings are fitted with hardened steel wear plates. The truck frame transfers the load to the equalizer through double coil and semi-elliptic springs. Cast steel journal boxes are fitted with bronze friction bearings and a bronze thrust bearing.

The 1,200-hp. Diesel engine operates at a brake mean effective pressure of 165 lb. per sq. in. with a firing pressure of 1,200 to 1,400 lb. This is far beyond the pressure used in any other engine of this general type, according to the manufacturer, but the engine, with its heavy construction, is said to have been designed for pressures well in excess of those currently being used.

This engine's high b.m.e.p. — which means that 1,000 hp. for traction can be developed with eight 9-in. by 12-in. cylinders — has been made possible by an inter-cooler located between the blower discharge and the intake manifold, which lowers the air temperature some 60 deg. F. before it enters the intake manifold. As a result, the temperature at the exhaust manifold is lowered by about 180 deg.

This high pressure permits this engine to have small cylinders for the horsepower developed. Maintenance is simplified by the ability of one man to pick up a piston and connecting rod without a crane or mechanical support, and one man and a helper can remove the cylinder head without a crane. Other parts that have to be worked on are correspondingly reduced in size and weight. The number of moving parts has been held to a minimum.

The crankcase is ventilated by the generator cooling fan, which pulls a two- to three-inch vacuum on the crankcase, thus minimizing the possibility of explosions. This is accomplished by connecting the fan housing and the crankcase interior with piping.

Tri-metal main bearing inserts are used. These comprise a 3/8-in. steel backing, a 1/32-in. copper-lead intermediate piece, and a .002-in. thick tin bearing surface.

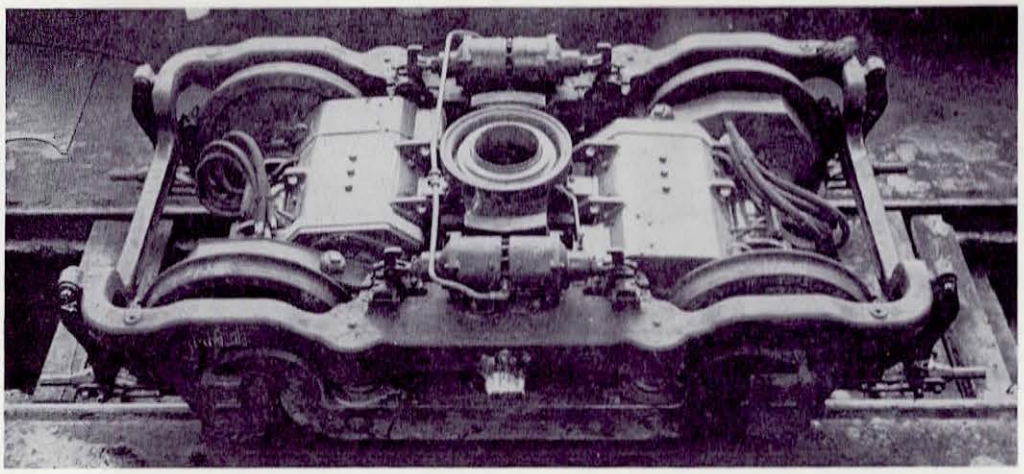
The exhaust manifold is water-cooled along with the cylinder heads and the supercharger to permit equal expansion of these parts, and, in this manner, to help keep the head joints tight.

Other characteristics of Lima-Hamilton design are the interchangeable intake and exhaust valve; the hose

*A description of the engine appeared in *Railway Age* of October 2, 1948, page 643.

GENERAL CHARACTERISTICS OF LIMA-HAMILTON 1,000-HP. DIESEL-ELECTRIC SWITCHING LOCOMOTIVE

Locomotive Class	B-B (0-4-4-0)
Diesel engine:	
One, eight-cylinder, in-line, vertical, super-charged, b.hp. available for traction	1,000
Driving motors:	
Number	Four
Type	362-D
Journal bearings (friction) size, in.	6½ by 12
Wheel, diameter, in.	40
Wheel base, ft.-in.:	
Truck	8—0
Total locomotive	32—6
Total weight, lb.:	
In working order	240,000
On drivers	240,000
Maximum overall dimensions, ft.-in.:	
Width	9—10
Height	14—6
Height to top of cab	14—6
Length (inside coupler knuckles)	47—10
Minimum radius curvature, ft.:	
Locomotive alone	75
With train	100
Supplies (total capacity):	
Lubricating oil, gal.	170
Fuel oil, gal.	600
Engine cooling water, gal.	190
Sand, cu. ft. (total)	28
Performance:	
Gear ratio	14:68
Starting tractive force (at 25 per cent adhesion), lb.	60,000
Tractive force, continuous, lb.	34,000
Speed at continuous rating, m.p.h.	8.9
Maximum speed, m.p.h.	60



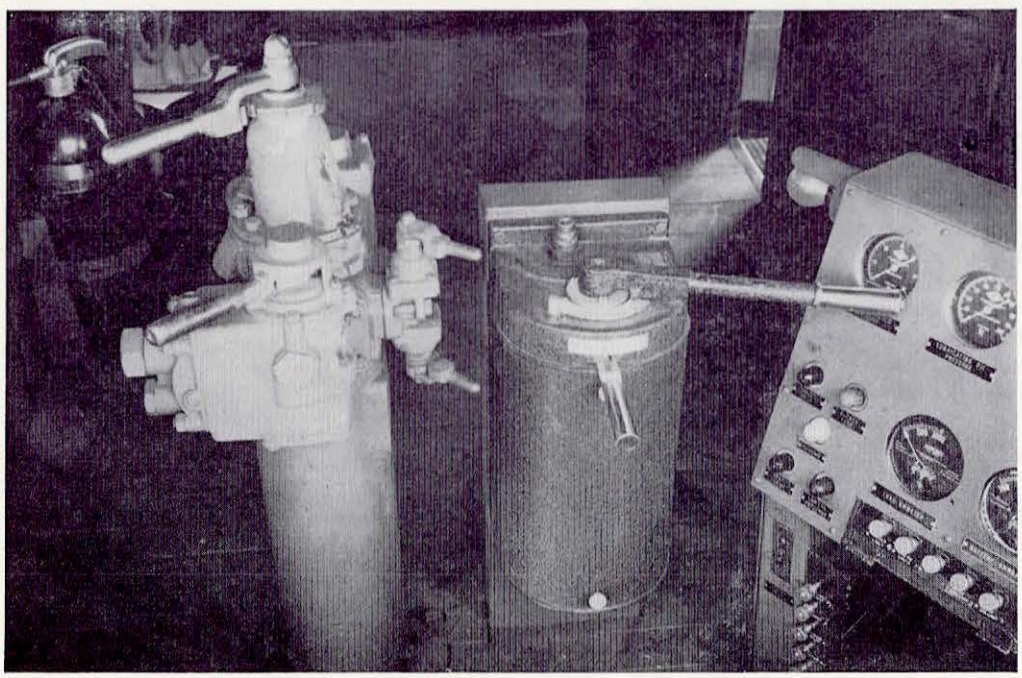
The four-wheel truck showing traction motors and center plate design

connection between cylinder liner and head; the seals between the cylinder liner and block, which eliminate any chance of water entering the crankcase; and the ease of inspecting or replacing main bearings.

Westinghouse electrical equipment is used throughout, with four Westinghouse 362-D traction motors driving the locomotive. Cooling air is supplied to each truck by separate blowers. All electrical equipment is interchangeable with other standard Westinghouse equipment, except for the main generator and the fan generator.

The main generator is Westinghouse Type 499-A, single bearing, self-ventilated, with Class B insulation. It is separately excited from an exciter-generator unit mounted on the main generator, driven by vee belts from the generator shaft extension. The exciter and an auxiliary generator are mounted on the same shaft. The auxiliary generator, regulated for 64 volts, provides power for control, lighting, battery charging, the two cab heaters, and excitation for the exciter of the main generator and for the fan generator. The latter is mounted on the main generator and is also driven by vee belts from the main generator shaft extension. Separately excited, and not regulated, this generator supplies power to the radiator fan motor and two traction-motor blowers.

The two traction-motor blower motors are of the series types with Class B insulation. The air from the blower passes through each center plate, then through the hollow truck bolster from which it is distributed to each traction motor. The blowers are motor driven, direct connected. Similarly, the radiator fan is motor driven, rather than mechanically driven from the engine. It can be shut down when the radiator shutters are closed, which aids in keeping the engine warm when idling on a cold day.



The cab controls and a portion of the instrument board

The four Westinghouse Type 362-D traction motors are series type, axle hung, forced ventilated, and equipped with single reduction gearing having a ratio of 14:68. They have Class B insulation. Traction motors Nos. 1 and 3 are in series at all times, as are Nos. 2 and 4. Each pair is in parallel with the other pair. At 16 m.p.h., a light shunt is put across the fields and at 32-m.p.h., a heavy shunt.

The control for the Lima-Hamilton switcher is a remote, electro-pneumatic, single station control, used with a Woodward P. G. governor and governor operator. This control functions to regulate engine speed and the main generator exciter field. It employs a faceplate type resistor, having 162 points, which is actuated by a vane motor controlled by the governor. This gives load control and load limit with each of the eight notches of the controller. The governor is set to give low horsepower in the low notches to facilitate switching passenger equipment, and to give a rapid increase in horsepower in the high notches for heavy freight switching. To start a heavy freight load, for example, the controller can be pulled around to the eighth notch, with the engine coming up to full speed and full power in 20 seconds.

The locomotive can be equipped with multiple-unit control, and the units to be built for the Erie are to be so equipped.

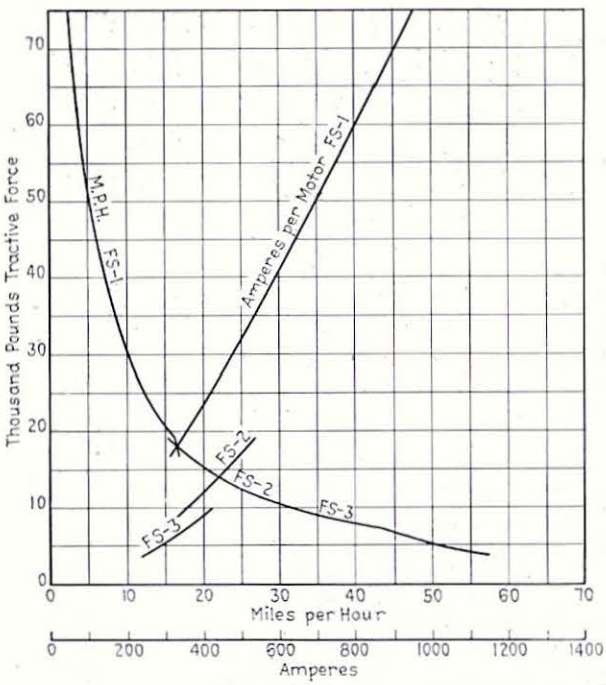
Lighting and other auxiliary apparatus is push-button controlled, while the two steps of field shunting, mentioned above, are automatically switched. The compressed air pressure for electro-pneumatic apparatus is 70 lb. per sq. in. Wheel slip relays operate a light to warn the engineman when slipping occurs.

Brake Equipment

Heavy-duty storage batteries furnish power for engine starting and for stand-by lighting. They are located in ventilated compartments, and for inspection and maintenance are accessible from the outside without inconvenience.

The air brake equipment is the Westinghouse No. 6-DS single-end automatic and self-lapping straight air brake, with main reservoir capacity of 60,000 cu. in. A Gardner-Denver air compressor is connected to the end of the main generator shaft by a flexible coupling. The truck brakes are the clasp type, with two brake cylinders mounted on each truck. A hand brake is connected to the brake rigging of one truck to hold the locomotive when idle. All brake piping and equipment are under the cab, readily accessible for quick, easy inspection.

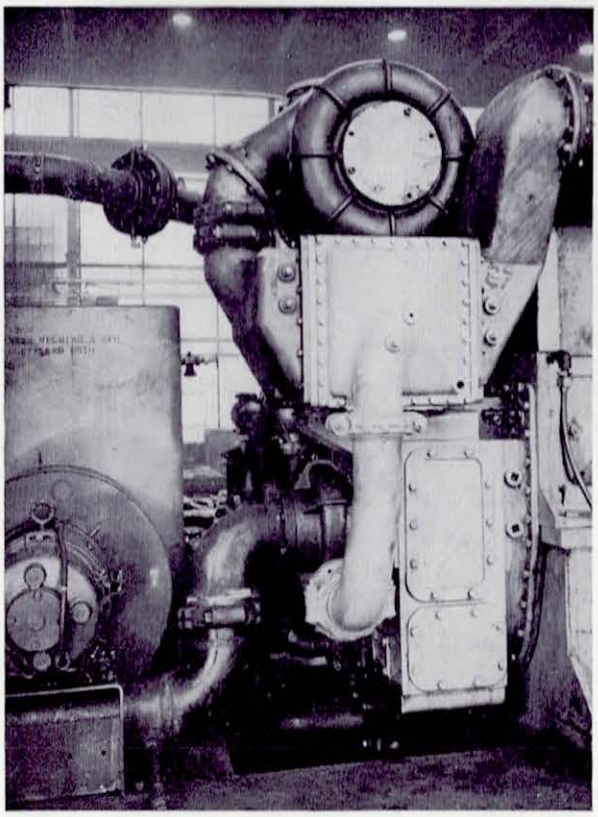
The underframe of the locomotive is of welded construction with a pocket in each end for the automatic coupler and draft gear. An A.A.R. Type E automatic



The speed-tractive force curve

PARTIAL LIST OF EQUIPMENT

Diesel engine	Lima-Hamilton Corporation, Hamilton, Ohio
Turbocharger	Elliott Co., Jeannette, Pa.
Bell ringer	Viloco Railway Equipment Co., Chicago
Windshield wipers	Charles A. Sprague Devices Co., Michigan City, Ind.
Inspection card holders	Adams & Westlake Co., Elkhart, Ind.
Windshield wings	Prime Manufacturing Co., Milwaukee, Wis.
Cab door—front and rear	Met-L-Wood Corporation, Chicago
Cab-door locks	Adams and Westlake Co., Elkhart, Ind.
Footboard	Apex Railway Products Co., Chicago
Side step treads	Blaw-Knox Company, Pittsburgh, Pa.
Headlight; number light box	Pyle-National Company, Chicago
Grid-type vent with weather cap	Protectoseal Company, Chicago
Air whistle	Leslie Company, Lyndhurst, N. J.
Fire extinguishers	Walter Kidde & Co., Belleville, N. J. Pyrene Manufacturing Co., Newark, N. J.
Sanders	Prime Manufacturing Company, Milwaukee, Wis.
Air compressor	Gardner-Denver Co., Quincy, Ill.
Air brake; foundation brake gear	Westinghouse Air Brake Co., Wilmerding, Pa.
Handbrake	National Brake Co., New York
Journal boxes, plain	Balmar Corp., Baltimore, Md.
Couplers and yokes	Buckeye Steel Castings Co., Columbus, Ohio
Friction draft gear	W. H. Miner, Inc., Chicago
Governor	Woodward Governor Co., Rockford, Ill.
Couplings	Falk Corporation, Milwaukee, Wis.
Trucks	General Steel Castings Corp., Granite City, Ill.
Wheels	Armco Steel Corporation, Middletown, Ohio Bethlehem Steel Co., Bethlehem, Pa.
Batteries	Electric Storage Battery Co., Philadelphia, Pa.
Electrical equipment	Westinghouse Electric Corp., Pittsburgh, Pa.
Motor cable clasp connectors	Burndy Engineering Company, New York
Emergency fuel shut-off valve	Manning, Maxwell & Moore, Inc., Bridgeport, Conn.
Fuel oil pump	Viking Pump Company, Cedar Falls, Iowa
Back pressure valve	Klipfel Manufacturing Co., Hamilton, Ohio
Lubricating oil pressure strainer	W. W. Nugent Company, Chicago
Lubricating oil filter	Michiana Products Corp., Michigan City, Ind.
Fuel oil filter	W. W. Nugent Company, Chicago
Fuel oil tank level gages	Nathan Manufacturing Co., New York
Water tank and lubricant gage	O. C. Keckley Company, Chicago
Special gages	Manning, Maxwell & Moore, Inc., Bridgeport, Conn.
Water temperature-operated switch and control sleeve	Detroit Lubricator Company, Detroit, Mich.
Cab ventilators	Prime Manufacturing Co., Milwaukee, Wis.
Cab air heaters	Edwin L. Wiegand Company, Pittsburgh, Pa.
Air filter and silencer	Air Maze Corporation, Cleveland, Ohio
Radiator cooling fan	International Engineering, Inc., Dayton, Ohio
Radiator shutter assembly	Kysor Heater Company, Cadillac, Mich.
Radiators and heat exchanger	Young Radiator Company, Racine, Wis.
Flexible pipe couplings	Victaulic Co. of America, New York



Supercharger end of engine with the intercooler in the foreground. Motor blower and lube oil tank at left. Note flexible pipe couplings used at joints

swivel coupler with a standard type friction draft gear is applied to each end of the locomotive. The uncoupling rigging is of forged steel bar construction and arranged for operation from either side.

Victaulic couplings are used on the piping. A flexible coupling with a rubber insert, it eliminates threading the ends of the pipe to be coupled, and is said to provide tight joints even where slight misalignment may exist. The Victaulic coupling is adapted to joints between the chassis and the engine where there is vibration and permits interchangeability in piping. Pipe for the air lines is of extra-heavy wrought iron, except for gages and miscellaneous piping, which is of copper. Fittings are extra heavy standard.

The fuel oil tank is under the locomotive frame and is arranged so that it may be filled from either side. The fuel oil level gages, fuel oil emergency shut-off valve and means for draining the tank are installed on both sides.

A 75-volt lighting system furnishes illumination for the cab, engine, cooling compartments, and number lights. There is a 32-volt, 250-watt Pyle-National electric headlight located at each end of the locomotive.

Four sandboxes, with a combined capacity of 28 cu. ft., are arranged for filling from the running board. Air-operated sanders are arranged to sand the front wheels of each truck in both directions, with the control valve located in the operator's compartment.

One 20-lb. Kidde fire extinguisher is located under the hood, and one in the cab. There is also a 1-½-qt. Pyrene extinguisher mounted in the cab.

CHARACTERISTICS OF THE LIMA-HAMILTON ENGINE

Full load sea level rating, hp. available for traction	1,000
No. cylinders	8
Bore, in.	9
Stroke, in.	12
Speed, r.p.m.	950
Sea level full load fuel rate at engine flywheel, lb. per gross b.hp.—hr.	0.4
Weights, lb.:	
Engine	16,600
Sub-base	5,000
Generator	10,700
Auxiliary generator	1,200
Supercharger	1,400
Overall length of engine installation, ft.-in.	16 - 3½
Overall height, ft.-in.	6 - 6
Overall width, ft.-in.	4 - 0
Height for removing piston, ft.-in.	7 - 9
Pressures, lb. per sq. in.:	
Full load firing pressure	1,200 - 1,400
Fuel nozzle opening pressure	3,600
Main bearing oil pressure	45 - 60
Fuel oil header	40 - 50
Water pressure to engine	35 - 40
Inlet manifold pressure, in. of mercury	30
Exhaust pressure to turbine, in. of mercury	21
Temperatures, deg. F.:	
Water from engine to radiator, max.	180
Lubricating oil from engine to cooler	200
Lubricating oil system:	
Gal. per min. at full load	180
Oil pressure to strainer and filter, lb. per sq. in.	75
Pressure to bearings, lb. per sq. in.	45 - 60
Discharge temperature to cooler, deg. F., max.	200

COLORFUL ARRAY OF RAILROAD EXHIBITS

(*Continued from page* 36)

identify scenes of the North Western being drawn on a six-foot easel.

The Indian village of the *Atchison, Topeka & Santa Fe* has been supplemented by an arcade of large photo murals showing a section of all of the states through which the Santa Fe passes. The arts and crafts workers have been provided with an outdoor shelter so that a greater number of visitors can see them at their work of silversmithing, weaving and making baskets. The popular trading post has been enlarged and a Quonset hut seating 250 persons has been erected at the north end of the grounds for showing travelogues. The Santa Fe also has four streamlined cars and a Diesel locomotive on display at the track exhibit.

The Rocket Village of the *Chicago, Rock Island & Pacific* has undergone a complete rebuilding, the tents of last year has been replaced by structures of adobe and red tile with southwestern ranch and mission style architecture prevailing. In addition to its "Fiesta" diner—which again serves luncheons and dinners—the railroad has on display a green and gold replica of its 1880 "Palace" dining car.

The *Illinois Central* has returned to the Fair with its "Old New Orleans" exhibit plus the first all-electric dining car. Completed only last March, the diner—"Cafe St. Louis"—serves regular meals to Fair patrons. Added to the I. C. exhibit are strolling musicians who sing melodies of the Deep South.

A structure of Spanish-American architecture, pat-

terned after its passenger station at Boise, Idaho, has been erected by the *Union Pacific* and filled with reproductions of western vacationland life. A miniature streamliner offering free rides for youngsters and the world's largest steam locomotive—"Big Boy"—are also part of the U. P.'s exhibit.

The *Chicago & Eastern Illinois* has added to its "Florida in Chicago" exhibit a 30-ft. scale replica of the Bok "singing tower," picturesque bird sanctuary at Lake Wales, Fla. There is also an "Avenue of Palms" and more than 2,000 varieties of unusual flora.

The *Pullman Company's* exhibit of "mock-ups" of sleeping car accommodations has been doubled, providing increased space and seating capacity for visitors. All questions about Pullman travel are answered by the crew of uniformed Pullman conductors and porters on duty.

The *Chesapeake & Ohio* has joined the roads serving dining car meals at the Fair with its "Chessie Club," made up of the line's new streamlined twin-unit diner and sleek "fishbowl" lounge car.

The *Railway Express Agency* is displaying a refrigerator car.

Both the *Army* and *Air Force* are represented at the Fair, the former exhibiting a Diesel engine, lounge car waiting room and three hospital cars. One of the cars is open for inspection, while the others are used as a first aid station and a motion picture theater, respectively. The Air Force is showing its latest combat weapons.

The "Train of Tomorrow" is again featured on the track exhibit, and will be supplemented at various times by name trains such as the revolutionary "Talgo" train, "California Zephyr" and others.

GAS-TURBINE-ELECTRIC LOCOMOTIVE READY

(*Continued from page* 21)

only be found by actual operating experience on a railroad. The possibilities of this locomotive in actual operation are still a big question mark. Several aspects must be investigated more thoroughly before it can be said with certainty that the present design belongs in the same category as tested and proved types of motive power.

The first item of prime importance is life expectancy. The bogey of the engineers when designing the gas-turbine locomotive power plant was 15,000 hours between major overhauls. This is about three times the interval for a Diesel engine and it should mean great economies in maintenance costs. The history of a rotary power plant versus a reciprocating engine bears out this promise. However, only continued service over several years will give the determining data.

The second big unknown is fuel. The present power plant is inherently much less efficient than the Diesel engine. Improvement in design and the use of better alloys, however, can and will increase this basic efficiency. Moreover, the gas turbine offers considerable promise some day of burning low-grade fuels, especially coal. The only part of the question that now appears vexing is that the gas-turbine power plant is a poor idler. It consumes one-third as much fuel at no load as at full load. As is well known, railroading is anything but a full-time, full-load operation. Again, only years of actual operation will reveal the fuel economics of the gas-turbine-electric locomotive, and the type of service for which it is best suited.

In addition, there are several operating characteristics of this new locomotive that can be evaluated only in revenue service. For example, the gas turbine is more efficient and can deliver considerably more power in cold weather than at summer temperatures. What does this mean in railroading? Variation in locomotive weight is another factor. When fully fueled and ready for operation, the gas-turbine-electric locomotive carries 50,000 lb. of fuel. This means more weight on driving axles and greater ability to start heavy trains. When the fuel supply is low, the loss of weight gives the locomotive the equivalent of seven motored axles where before it had eight. What does this mean in terms of ton-miles hauled?

The locomotive looks like a conventional electrical locomotive. It has the same type of cab and running gear. The new part is the gas-turbine power plant which has been designed for electric drive, and put into existing space and weight limitations. It is believed to offer great possibilities for the future, but no one can evaluate its true worth today. For example, the Diesel-electrics now going into service reflect 30 years of development guided by operating experience.

Even though this first Alco-G.E. gas-turbine-electric locomotive has lived up to expectations on initial tests, it may certainly be said that the models to follow will be considerably different and will be evolved slowly and cautiously.

The Union Pacific has agreed to operate this locomotive in service beginning this summer. The experience gained there will give further information as to its durability, suitability and operating costs.

This locomotive may or may not be a milestone in the century-long evolution of better railroad motive power. At best, the five years of research already spent on this first unit can represent no more than the beginning of the development of a locomotive type suitable for revenue service.

The primary objective of this development is to find a locomotive prime mover that will: Burn low-grade fuels — especially coal — economically; give higher horsepower output per pound and per cubic foot; and have greater reliability and lower maintenance cost. How well Alco-G.E. is meeting these objectives, and how the gas-turbine power plant will compare with other locomotive prime movers, are still unknowns that only miles of operation in real railroad service can determine.

GENERAL NEWS

"Negative" Reparations Orders Are Reviewable

"Shippers-choice" provisions of I.C. Act found no bar to appeal

Passing upon the so-called Norfolk Wharfage Case, which involves a claim of the federal government, the United States Supreme Court has ruled that Interstate Commerce Commission orders denying reparations to shippers are subject to judicial review. The decision, embodied in a 6-to-3 opinion announced by Justice Black, was accompanied by a sharply worded dissenting opinion by Justice Frankfurter with whom Justices Jackson and Burton agreed.

The dissent recalled that previous decisions of the Supreme Court in similar cases, which happened to involve private shippers, had sustained the government (which then defended the commission rulings) by holding that the courts were without jurisdiction to review commission orders denying reparations. As to the government's change of front Justice Frankfurter conceded that "no doubt enlightenment sometimes comes through self-interest"; but he went on to assert that "this court's construction of the Interstate Commerce Act, long matured in a series of cases, ought not to shift with a shift in the government's interest." To yield to the government's "new" contention and thus decide as the majority did, the dissenting opinion also said, is "to reverse a settled course of decision" and "to mutilate the whole scheme of the Interstate Commerce Act by disregarding the distribution of authority Congress saw fit to make between the commission and the courts for the enforcement of that act."

As to jurisdiction to review commission orders denying reparations, the court's majority decision found that it lies with a one-judge federal district court—not the special three-judge court made available for appeals from some commission orders. The decision sent the present case back to the United States District Court for the District of Columbia for consideration on its merits under the one-judge procedure. The case involves the undertaking of the Department of Justice to have set aside a commission ruling that the railroads' refusal to make an allowance for wharfage and handling services performed by the Army on its World War II freight moving over its piers in Norfolk, Va., was not an unjust and unreasonable practice.

The assailed commission decision was reported in the *Railway Age* of August 30, 1947, page 57. As noted there, the controversy arose in June, 1942, when the Army took over some Norfolk piers formerly operated by a public wharfinger whose charges had been absorbed by the railroads. When the Army took over, the carriers refused to make it an allowance equivalent to the previous absorption of 4 cents per 100 lb., the refusal having been based on the applicable tariffs which restricted the holding-out to load and unload carload export freight to that moving over so-called public piers, i.e., piers operated by railroads, steamship companies, or public wharfingers. The government's claim, which the commission denied, is for reparations at the rate of 4 cents per 100 lb. on all the freight on which the Army performed its own pier services.

Attorney General Sues Himself

The case reached the Supreme Court on the government's appeal from a ruling of a three-judge court, sitting in the United States District Court for the District of Columbia, which dismissed the complaint on the ground that the United States cannot sue itself. That ruling noted that the statute governing actions to review orders of the commission stipulates that such actions "shall be brought . . .against the United States." It also found that it was the duty of the Department of Justice to defend commission orders, and pointed out that the petition and answers in the case were signed by the same assistant attorney general. Thus the three-judge tribunal determined that the case presented "no actual controversy but merely a discussion or debate of a moot question." (See *Railway Age* of June 17, 1948, page 49).

In finding that this dismissal of the complaint was "error," the Supreme Court called the situation on which the lower court relied a "surface anomaly," arising from statutes defining the attorney general's duties. Distinguishing between the government as a regulator and as a shipper, the court said that the government in the latter role "is not less entitled than any other shipper to invoke administrative and judicial protection." At the same time it pointed out that the Interstate Commerce Act "contains adequate provisions for protection of commission orders by the commission and by the railroads when, as here, they are real parties in interest." In the latter connection, the court had previously noted that the I.C.C. was specifically made a defendant in the case, while the railroads that collected the wharfage charges intervened as defendants.

Turning to the question of whether a commission order denying reparations was immune from judicial review, the court quoted first from those provisions of the Urgent Deficiencies Act of 1913 which provided for the three-judge procedure and stipulated that the federal district courts "shall have original jurisdiction" of cases brought to enjoin or set aside "any order" of the commission. The legal consequences of the present commission order, if upheld, the court added, "will finally relieve the railroad of any obligation to the government on account of alleged unlawful charges; the order thus falls squarely within the type made subject to judicial review...."

Construction of Section 9

After making that pronouncement, the court proceeded to examine the I.C.C. and railroad contention that section 9 of the Interstate Commerce Act barred the government or any other shipper from judicial review of commission orders denying reparations. Section 9 provides in part that any person claiming to be damaged by a railroad "may either make complaint to the commission...or may bring suit...for the recovery of the damages . . . in any district court of the United States of competent jurisdiction; but such person...shall not have the right to pursue both of said remedies, and must in each case elect which of the two methods of procedure herein provided for he...will adopt."

The contention of the commission and the railroads as to the foregoing was that if a shipper elected to make his complaint to the commission, as the government did, he was barred from seeking any judicial review of the commission order. "Such a sweeping contention for administrative finality is out of harmony with the general legislative pattern of administrative and judicial relationships," the court said, adding that it had "consistently" held commission orders reviewable "upon charges that the commission has exceeded its lawful power." And the language of section 9 did not suggest to the court "an abandonment of these consistent holdings." It suggested that a shipper who elects either to make complaint to the commission or bring suit in a court is thereafter precluded only from "initiating a section 9 proceeding in the other."

Section 9's language, the court continued, "controls the forum in which reparation claims may be begun and tried to judgment or order; it does not purport to give complete finality to a court

judgment or to a commission order merely because a shipper elected to proceed in one forum rather than the other." Reference was also made to the fact that the section gives railroads recourse to the courts in that they can force a shipper to sue for reparations awarded by the commission. "It hardly seems possible," the court added, "to find from the language of section 9 a congressional intent to guarantee railroads complete judicial review of adverse reparation orders while denying shippers any judicial review at all."

The court turned then to the railroad and commission contention that their suggested interpretation of section 9 was required by the court's holding in Standard Oil Co. v. United States, 283 U. S. 235 and other cases that followed it. Those were the previous cases in which shippers were denied the right to judicial review of commission orders denying reparations. The Standard Oil case set the precedent, and in it, the present decision recalled, judicial review was denied on the ground, among others, that the assailed commission order was "negative" in form, and "was therefore beyond judicial appraisal under the 'negative order' doctrine." That doctrine was found to have been wholly abandoned" in Rochester Tel. Corp. v. United States, 307 U.S. 125.

Other grounds for the court's determination in the Standard Oil case were listed as the finding that the commission's order was supported by substantial evidence and was not otherwise in violation of law; that the shipper having elected to test its damage claim before the commission was precluded from judicial review; and that a three-judge court was an improper tribunal to adjudicate damage claims under section 9. In the present case, the court noted, the government is contending that the commission's order cannot meet the test requiring that it be supported by substantial evidence and that it is not otherwise in violation of law. Also, the court found the case to be one wherein the government could not have gone to court in the first instance, because the allegation that the failure to make the allowance rendered the export rates unlawful required a determination by the commission. "Consequently," the decision said, "the government here had no 'right of election' between commission and court that could be 'deemed an adequate ground for making the commission's award final. . .'" For the latter quotation, the court went to Baltimore & Ohio R.R. Co. v. Brady, 288 U.S. 448 which "emphasized the importance" of the prior-commission-determination phase "in applying the Standard Oil construction of section 9."

Court Wiggles Out

This brought the court to its task of reconciling the present decision with what it did in Ashland Coal Co. v. United States, 325 U.S. 840, further identified as the "only case that relied on the Standard Oil decision after we had abandoned the negative order doctrine." The present decision conceded that, in affirming without argument the judgment of a three-judge court in the Ashland case, the Supreme Court's opinion "cited two pages of the Standard Oil opinion that support the interpretation of section 9 urged here by the commission and railroads." The decision went on to assert, however, that "other grounds" for the affirmation "also appear there." Thus, as the court put it, "we cannot accept the Ashland Case. . . holding nor the Standard Oil Case on which it rested as requiring the interpretation of section 9 which the railroads and commission here urge.

"Our acceptance of that interpretation," it continued, "would mean that a shipper who submitted to the commission only a question of the reasonableness of rates could have an adverse order reviewed by a court . . . while a shipper who asked for that administrative determination plus reparations could get no judicial review at all . . . On any ground except the now discarded 'negative order' doctrine, this would appear to be an unsupportable and totally illogical limitation of the congressional command for judicial review . . ."

The decision closed with the determination that one-judge district courts had jurisdiction to review the commission orders involved. This determination was based on a finding that an order denying reparations could not be included among those of "widespread importance" which Congress had in mind when it set up the three-judge-court plan for expeditious review. Thus the prescribed procedure is the same as that available to a shipper who finds it necessary to bring a court action against a railroad for the payment of reparations awarded by the commission.

Dissenting Opinion Attacks Decision

The dissenting opinion, only epitomized above, was a comprehensive attack on the majority decision. While the dissenters conceded that the "negative order" doctrine had been abandoned, in the Rochester Telephone case, they nevertheless insisted that the Standard Oil decision was then left "intact," because the Rochester Telephone decision "explicitly pointed out that 'the main basis' of the Standard Oil decision 'was not the negative order doctrine but [that] the statutory scheme [section 9] dealing with reparations' precluded review of an order denying money damages." The "only difference" between the Standard Oil case and the present case "is that in the earlier case the Standard Oil Company was the plaintiff, and in this case it is the government," Justice Frankfurter also said.

As to the majority's reliance on the Urgent Deficiency Act of 1913 as a basis for its finding that the order was reviewable, the dissenting opinion said that the reference there to "any order" of the commission does not mean "every order." It went on to contend that the reference was to orders of the type which could be brought before three-judge courts, and that reparations claims were disqualified because they "have been specifically dealt with in other sections of the act," where review is "specifically provided for" to the extent that it was "intended."

With respect to the government's change of front, Justice Frankfurter had this to say: "In order to recover a money claim of its own, the government in this case has suddenly shifted a position consistently maintained by it for nearly 20 years against all other shippers . . . . Indeed, at the very time the government was arguing before the District Court of the District of Columbia for the right to review an order denying it reparations, the government successfully resisted precisely the same argument by a private shipper in a suit in the District Court for the Eastern District of Michigan." The latter occurred in Great Lakes Steel Corp. v. United States, which is now pending before the Supreme Court. Later on, Justice Frankfurter put it this way: "The government's interest has changed, but not the force of its position when it was without self-interest."

Hear Firemen's Request For Extra Man on Diesels

Called "featherbedding" by counsel for railroads

The claim of the Brotherhood of Locomotive Firemen & Enginemen that an extra fireman is needed on Diesel-electric locomotives for reasons of safety is "merely whitewash for a demand for the creation of unnecessary jobs," Howard Neitzert, of Chicago, chief counsel in the case for the railroads, said on June 28 in his opening statement before a Presidential "fact-finding" board. The board, which consists of George W. Taylor (chairman), former chairman of the National War Labor Board; Grady Lewis, Washington, D. C., attorney, and George E. Osborne, professor of law at Leland Stanford University, earlier this year rejected a demand by the Brotherhood of Locomotive Engineers for an additional engineman on Diesel-electric road locomotives (see *Railway Age* of April 16, page 60).

The hearings, which are being held at 230 Park avenue, New York, were opened on June 27 by Harold Heiss, counsel for the B. of L.F. & E., who said the union's demands embrace six major propositions. "The first request," he continued, "is a demand for a wage increase for firemen employed on oil-burning steam engines and straight electric engines. It is a request by locomotive firemen for elimination of the differentials in wage rates between oil-burning steam engines and

straight electric engines, on the one hand, and the rates for coal-burning and Diesel-electric engines on the other hand. In short, we seek to elevate oil and electric rates to the level of the coal and Diesel rates.

Other Demands

"Demand No. 2 is unquestionably our principal demand," Mr. Heiss went on. It "requests that the carriers provide for the assignment of an additional fireman (helper) on all Diesel-electric locomotives operated in road service for each four units or less. Notice No. 3 seeks to require the carriers to assign a fireman (helper) to all locomotives operated in yard service irrespective of the weight of the locomotives. Presently . . . the railroads are not obliged to assign a fireman to a Diesel-electric or other internal combustion engine operating in yard service within designated switching limits when the locomotive weighs less than 90,000 lb. on drivers. Notice No. 4 deals with the manning of rail motor cars . . . certain of which are presently exempted from the general requirement to assign a fireman . . ." From the inception of railroading, he explained, it has been the overall policy of the B. of L.F. & E. to demand the assignment of a fireman, in addition to the engineman, to all power operated on rails because, in the calculated judgment of the union, it is unsafe to run a vehicle on a railroad without two operators.

The fifth demand is for the establishment of certain changes in "savings clauses" which would ensure that the benefits of local agreements written into contracts to meet peculiar local conditions "shall not be surrendered as a result of a national agreement that may be arrived at as a result of these proceedings." Demand No. 6 is for the creation of a committee in eastern territory to which disputes arising under the possible national agreement may be submitted. It was recommended that the committee be composed of equal numbers of representatives of labor and management. If the committee could not reach a decision the dispute would be carried to the Adjustment Board "or disposed of in some other fashion."

Mr. Heiss concluded by saying, in part: "We assign primary importance to [the request for an additional fireman in the engine rooms of Diesel-electric road locomotives] because we are conscious that our position as a railway labor organization carries with it the solemn responsibility to focus official and public attention upon unsafe railroad operations and to seek correction of that condition. We believe that Diesel operations without full attendance in the engine rooms are uneconomical and inefficient. We believe that the railroads are, by every standard of economics and fair treatment, bound to allocate a small portion of their enormous savings and profits from the use of these new Diesel machines towards the end of furnishing adequate manpower on them. But above all we believe that operation of Diesel engines under circumstances which require the fireman to leave his post of lookout in the cab to work in the engine room constitutes the biggest single menace to safety in railroad operations today."

Mr. Neitzert, in his opening statement, said, "when this organization talks about safety it is merely trying to conceal the feathers of a wasteful and expensive featherbed rule. Diesel locomotives are operated safely and efficiently with the crews that are now assigned to them. The fact is that these locomotives could be operated safely and efficiently with fewer men than are now assigned. It is difficult to see how any one could seriously and honestly contend that any useful purpose would be served by creating more jobs on these types of locomotives."

Everyone knows, he continued, that the job of a fireman assigned to a Diesel locomotive "is one of the softest jobs on the American railroads. The assignment is much sought after and highly prized and only men with the highest seniority have an opportunity to bid in the jobs." The railroads contend that the union's demands were made only to increase the influence and wealth of the B. of L.F. & E. and the power of its management.

Reviewing the history of the Diesel manpower question, Mr. Neitzert said the demands of the firemen "would never have been served had it not been for the efforts of the Brotherhood of Locomotive Engineers to reopen the jurisdictional dispute which has existed between these two organizations since 1936 as to who should represent the so-called helpers or assistants assigned to Diesel locomotives. Jurisdictional disputes of this kind exist because labor organizations now claim the right to assert and prosecute demands which have no relation to the interests of the employees they represent, but which have for their sole purpose the enhancement of the power and wealth of the union itself. The use of such tactics in jurisdictional controversies between labor organizations, if permitted to continue, must necessarily result in waste, inefficiency, poverty and ruin. Such tactics completely disregard the good of the industry, the public welfare and the best interests of the employees represented by the union.

"Firemen now assigned to Diesel locomotives," Mr. Neitzert concluded, "owe their employment to the fortuitous circumstance that for more than 70 years there was a fire to tend on all railway locomotives."

David B. Robertson, the first witness for the B. of L.F. & E., of which he is president, was testifying as this issue of *Railway Age* went to press.

Railroad spokesmen have said that an additional fireman on Diesel-electric road locomotives would add $40,500,000 annually to their costs and that the figure would increase as more Diesels are placed in service.

In rejecting the engineers' demands the "fact-finding" board reported to President Truman that "there is no merit in the engineer's contention for the employment of an additional full-time assistant engineer in the engine room of Diesel-electric locomotives on the ground that a significant contribution to safe and efficient operations would be made." The board held that "the claim of the Brotherhood of Locomotive Engineers cannot be supported on any logical or reasonable basis."

The Railway Labor Act gives the "fact-finding" board 30 days in which to hold hearings and make a report to the President, although the time may be extended by mutual consent of the parties involved. After the filing of the report a 30-day "cooling off" period must elapse before a strike can be called. Negotiations between the railroads and the B. of L.F. & E. over the latter's demands began last January 14. Failing to reach an agreement, both parties requested the intervention of the National Mediation Board, which entered the dispute on January 18. On February 15 the mediation board notified the President of its inability to effect a settlement and Mr. Truman named a "fact-finding" board consisting of the same members as the board then dealing with the engineers' demands.

Rail Presidents Oppose "Radio-Safety" Bills

Gurley, Hill, White, appear before Congressional committees

Statements made by Interstate Commerce Commissioner William J. Patterson to the effect that railroad operating rules are not observed were challenged by two railroad presidents—F. G. Gurley of the Atchison, Topeka & Santa Fe and J. B. Hill of the Louisville & Nashville—at hearings held last week before a House interstate and foreign commerce subcommittee on proposed legislation to give the I.C.C. authority to require railroads to install and maintain communication systems and to establish and observe operating rules and practices "to promote safety of employees and travelers." In his prepared statement, Commissioner Patterson, who favored the proposed legislation, said that "some of the [railroad operating] rules are good but not observed," and he elaborated on the charge in his subsequent answers to questions of committee members.

Summarizing the commissioner's charge as one which alleged that the railroads "make these rules and no one pays any attention to them," Mr. Gurley said that he was "shocked to hear that statement, just terribly shocked, because in all of my experience I just have this to say—'tain so, McGee.' " Mr. Hill said that he, "like Mr. Gurley," was "tremendously surprised at Mr. Patterson's statement

that management is not interested in enforcing rules." The L.&N. president added that "if there is anything on earth that management does try to do, it is to prescribe the rules and to undertake to enforce them."

The House subcommittee which conducted the hearings is headed by Representative Beckworth, Democrat of Texas, and the proposal which it has under consideration is embodied in H.R.378, a bill introduced by the parent committee's chairman, Representative Crosser, Democrat of Ohio. A Senate interstate and foreign commerce subcommittee, headed by Senator Myers, Democrat of Pennsylvania, also held hearings last week on the similar Senate bill, S.238, introduced by Senator Johnson, Democrat of Colorado, who is chairman of that subcommittee's parent committee.

Messrs. Gurley and Hill appeared first at the Senate hearings where each made a detailed statement in opposition to the proposed legislation. They filed copies of those statements with the House committee while making their comments on Commissioner Patterson's testimony. Meanwhile, the Senate subcommittee heard other opposition presentations from William White, president of the Delaware, Lackawanna & Western; J. M. Hood, president of the American Short Line Railroad Association; and J. Carter Fort, vice-president and general counsel of the Association of American Railroads. It also heard Harry See, national legislative representative of the Brotherhood of Railroad Trainmen, a supporter of S.238, who returned to supplement a statement he had made at an earlier hearing (see *Railway Age* of May 28, page 45, and June 18, page 67).

Patterson Favors Legislation

Commissioner Patterson opened his statement in support of H.R.378 by identifying himself to the House subcommittee as the commissioner who has charge of the administration of section 25 of the Interstate Commerce Act, which includes provisions of the so-called Signal Inspection Act of 1937 and which H.R.378 would amplify by extending its coverage to radio and other communication facilities and operating rules. The commissioner also noted that the commission's Bureaus of Safety and Locomotive Inspection report to him. He went on to point out that legislation like that proposed in H.R.378 had been recommended by the commission in its last three annual reports.

Referring to the provisions of the bill, Mr. Patterson asked the congressmen to note that the proposed grants of authority to the commission "are not absolute but may be exercised only to promote safety of operation." Thus, as the commissioner put it, "there is no broad grant of authority to require the use of radio for experimental purposes or for convenience, or to establish or change any operating rule except for the purpose of promoting safety of operation."

Referring then to the legislation designed to promote railroad safety which has been enacted over the past 50 years, Mr. Patterson asserted that such legislation "has in every instance proved to be not only of advantage to the carriers from a safety standpoint, but has also resulted in more efficient and economical operation." Among the "more important" of such enactments, the commissioner listed the Locomotive Inspection Act, the Safety Appliance Acts, the Hours of Service Act, and the Signal Inspection Act. "I doubt," he said, "if any railroad would now desire to have any of this legislation repealed." In that connection the statement filed with the subcommittee by President Hill of the L.&N. advocated repeal of the Signal Inspection Act. "Better results," Mr. Hill said, "would ensue from the repeal of Section 25 of the Interstate Commerce Act than from the proposed amendment."

Discusses Radio Installation

Coming to his interpretation of the bill as it would relate to the installation of radio systems on railroads, Commissioner Patterson said that he could not foresee at this time "a situation where I would recommend the installation of a radio system except as an additional safety device to supplement existing block signal systems or train-stop, train-control, or cab-signal systems." He expressed his view that radio "has not been developed sufficiently to displace any of those systems for the safe operation of trains." Nevertheless, he insisted that the commission "should have jurisdiction to require the installation of radio to promote safety of operation so as to keep abreast of developments and make necessary requirements for its installation when it becomes more perfected and there is reasonable certainty that it will aid safety of operation."

As to the operating-rules phase of the bill, Mr. Patterson took issue with railroad contentions that this would mark "a radical departure in railroad regulation." The commissioner saw "nothing radical" in it, because it would "merely extend" the commission's jurisdiction in the field of safety of operation. He then made what amounted to a suggestion that railroad expressions of alarm should not be taken seriously. "The railroads," he said, "generally have taken the position that every extension of regulatory legislation . . . is radical, but experience has proved the desirability of all such regulation, and no one is seriously contending that any of these enactments should be repealed."

To point up what he called the "necessity" for the proposed extension of commission authority, Mr. Patterson gave illustrations of "what we can and cannot do under the existing safety laws." He said that under the present section 25 the commission may require the establishment of a block signal system, but it has no "specific" authority to establish rules "for the safe operation of trains under such block signal system." He also referred to the position, which he said had been taken by J. M. Souby, general solicitor of the A.A.R., that the commission may not under section 25 require the establishment of a manual block signal system, "which for the most part consists of operating rules . . . " Mr. Patterson's own view on the matter is that it "may be said to be debatable."

Can "Investigate" but Not "Correct"

Under the Accident Reports Act, he continued, the commission may investigate accidents; but "we have no power to order correction of unsafe conditions," and "our experience has been that many of our recommendations are ignored." Next, Mr. Patterson referred to the commission's order in the No. 29543 proceeding which requires the installation of train stop, train control, or cab signal systems where trains are operated at speeds of 80 m.p.h. or more. Once such systems are installed, he complained, the commission will have "no control over the speeds even though bridge, track, roadbed, or other conditions may be such that existing speeds are inconsistent with safe operation."

As to accidents to track motor cars, the commissioner said that many of the carriers have not provided rules for the safe operation of such cars—"and apparently never will, unless compelled to do so." He added that "all of these track motor cars are not small and easily removed from the tracks, as stated by Mr. Brinkworth." Mr. Brinkworth is J. J. Brinkworth, vice-president of the New York Central, who appeared in opposition to the bill at the House subcommittee's earlier hearings.

Commissioner Patterson then addressed himself to questions raised at those earlier hearings by Messrs. Fort and Souby. These A.A.R. officers, as the commissioner put it, "wonder" if the bill would permit the commission to prescribe train lengths, the number of employees on trains, grade crossing protection, or the building of new bridges, and require the railroads to arrange their clearances to meet standards that the commission might set up. Mr. Patterson did not deny that the bill might permit the commission to enter some of those fields.

"The power to establish rules, regulations, and practices to promote safety of train operation," he said, "carries with it no authority to require the building of bridges or track structure, provide grade crossing protection, or require changes in clearances. Such power, however, might be invoked to require safe operation over bridges or track structure found insufficient or defective, to require certain protection where clearance conditions are unsafe, and to limit speeds over certain grade crossings where adequate protection is not provided. Conceivably it could be used to regulate train lengths to the extent that the length of a train becomes an important factor in safety of operation. Assuming

the train is properly protected, I cannot conceive how the number of employees on a train could be affected by an operating rule, regulation or practice designed to promote safe operation.

"The principal thing to bear in mind is that no change could be ordered in carriers' operating rules until the commission found that the existing rules, regulations or practices resulted in unsafe operation. Such a finding would be made only after full hearing, if an interested party desires a hearing, for it has always been the policy of the commission not to enter mandatory orders until everyone concerned has had an opportunity to be fully heard."

In closing, the commissioner said that if present operating rules "are as good and safe" as the carrier presentations before the subcommittee indicate them to be, "there would be nothing for the commission to do." Previously, where he said that "some of the rules are good but not observed," the commissioner also said that "in other instances the rules could be improved"; but it was his "considered judgment" that "in the main, the operating rules, regulations, and practices of the railroads are intended to and do promote safety of operations."

Would Create Unneeded Jobs—Gurley

In the statement which he made before the Senate subcommittee and filed with the House subcommittee, President Gurley of the Santa Fe first stressed the railroads' "constantly improving safety record," which he called "outstanding" as compared with the records of other agencies of transportation. In view of this railroad safety record he did not think it could be contended that S.238's proposal "to transfer the promotion of safety in all of its phases to the commission is necessary or desirable in the public interest."

Pointing out that operating rules are issued by management and are "not a matter of agreement with employees," Mr. Gurley noted that management is thus free to change the rules as operating conditions require. Prescription of the rules by a government agency, in his opinion, would result in a loss of this flexibility. The Santa Fe president went on to review presentations made in support of the bill by representatives of railroad labor organizations. The interpretations of the bill's provisions by some of these labor representatives "impressed" Mr. Gurley "with the hazards of such loose language." The labor representatives, he said in another place, apparently regard the proposed legislation "as being sufficiently broad in its scope to give the commission power to prescribe in the minutest detail all operating rules and practices."

With respect to the earlier testimony regarding the operation of track motor cars, and its references to information about train movements coming from dispatchers, Mr. Gurley did not think it had been pointed out that "the organizations have been quite successful in securing interpretations from the adjustment boards to the effect that the train dispatcher may not give a line-up to a man on a motor car directly, but they insist that the information must be relayed to the man on the motor car through an operator." This, he added, is "another instrumentality for the creation of additional jobs which are not needed."

He also referred to attempts of the Order of Railway Telegraphers to force the employment of an operator in cases where maintenance of way employees, while working between stations, had "short conversations" with dispatchers through the medium of a portable set hooked onto the dispatching circuit. In that connection, he thought it was "not unfair" to say that "there would be more communicating between maintenance of way employees and the train dispatchers . . . if it were not for this threat of increased expense out of proportion to work done." Referring next to the I.C.C.'s call, in its latest annual report, for greater economy and efficiency in railroad operations and "bold experimentation with new devices," Mr. Gurley asked how the railroads could follow that advice if they are to be "placed in a strait jacket of control over the small intimate details of their internal operation . . . "

Returning again to the subject of track motor car operations, the Santa Fe president noted the rules and regulations for the safe operation of such cars in effect on his road. He also said that the Santa Fe has installed 4,400 automatic signal indicating devices "over and above the automatic signals to control the movement of trains," which "give indication to motor car operators about train movements." And he pointed out that "in many instances the automatic signals designed primarily for governing movement of trains are beneficial also in giving indication to operators of motor cars concerning approaching trains."

"Intrigued" by Unionist's Statement

Mr. Gurley was "intrigued," as he put it, by a statement made at the previous hearings by one of the labor representatives who said that the bill would give the commission authority to enforce rear-flagging rules. The Santa Fe president asked if it were to be implied that the commission would have the power of employee discipline, and that the commission's discipline would be such that the employees would observe rules better. Such an implication should be taken "pretty seriously" in view of the railroads' experience with the National Railroad Adjustment Board set-up under the Railway Labor Act, Mr. Gurley warned.

"Management," he said in the latter connection, "has had occasion to be quite concerned in recent years about the adverse effect upon successful discipline produced by decisions of the railroad labor adjustment boards. We found, much to our regret, that an interpretation of another law turned out to be such that adjustment boards possessed authority to overrule railroad management about discipline."

In closing, Mr. Gurley read an excerpt from the editorial entitled "Telling the Railroads How to Spend Money They Haven't Got," which appeared in the *Railway Age* of June 11. He also inserted the full text of the editorial into the record of the hearing.

Hill Cites "Staggering Expense"

President Hill of the L.&N. characterized S.238 generally as a proposal "fraught with great peril to economical and efficient operation." It would, he added, "needlessly multiply bureaucratic activities and invite ill-qualified supervision"; and the expense "would be staggering because of the large number of men required to police the law." Like Mr. Gurley, Mr. Hill raised questions as to whether agencies of the I.C.C. would replace adjustment boards and assume their functions. He also asked whether "present mediation of disputes" would be dispensed with, and whether the commission would have authority to require the employment of two engineers, two firemen, or an additional mechanic on Diesel-electric locomotives.

The L.&N. president went on to suggest that, if the bill were passed, "maybe a telegrapher, telephone operator, a train pilot or other contractual employee would be wanted for each motor car." However, as he put it, he "would not assert that in addition to their great urge for safety for other employees, some of the brotherhoods, particularly those representing dispatchers and operators, had these important features in mind." At the same time, he referred to what he characterized as the "guarded' endorsement given the bill by Alvanley Johnston, grand chief engineer of the Brotherhood of Locomotive Engineers. Mr. Johnston, Mr. Hill recalled, "wanted no more responsibility placed on the engineers."

As to the suggestion that track motor cars should be treated as trains, Mr. Hill estimated that such a plan on the L.&N. might require the employment of three times as many dispatchers as are now in service. "At present," he explained, "there are approximately 450 trains operated over the L.&N. system daily, and there are approximately 1,000 motor cars making at least two separate trips per day. It requires no stretch of the imagination, therefore, to visualize the magnitude of the proposal which would require integrating 2,000 motor car movements a day with present train movements. If motor cars could be integrated with the entire system of train operation, and operated by train orders, it is estimated that the territory of a dispatcher could not exceed 50 miles; on heavy traffic division possibly as low as 20 miles. This would require from two to three times the number of dispatching

territories, dispatching circuits, and dispatchers as at present."

Integration of track-motor-car operations with train operations, the L.&N. president continued, would also confront carriers with increased costs such as those which would be incurred by the L.&N. under its agreement with the O.R.T. That agreement, as summarized by Mr. Hill, provides that "no employees, other than telegraphers and train dispatchers, will be permitted to handle train orders," and that "except in case of emergency, if other employees use a telephone at a point where no operator is employed, an operator idle on that day will receive a day's pay." He added that the "net result" of the application of that rule "would be the employment of not less than an additional telegrapher for each motor car in service, at an annual cost of $2,704,000" to the L.&N.

He went on to predict that this "would not be all," for the train service organizations "contend that they should operate or protect motor cars when they move under train orders." Because the National Railroad Adjustment Board has "consistently supported" such contentions, Mr. Hill suggested that, if track motor cars become trains, "the minimum requirement would be one train service employee to act as pilot for each movement of a motor car." If the "pilot" were a conductor, the annual cost to the L.&N. would be "approximately $3,937,440 at present rates of pay."

In closing the L.&N. president said that he could not "too strongly emphasize the disastrous results, financial and operating, that are bound to follow the constant encroachment on the authority of railroad management, and the placing of important policy decisions upon a government bureau, however capable and

(Continued on page 59)

Truman Gets Power To Revamp Agencies

No federal agency exempt from new reorganization act

President Truman last week signed the bill giving him authority to reorganize agencies of the federal government and immediately submitted to Congress seven proposed reorganization plans. The President is expected to be guided in the formulation of reorganization plans by the reports of the so-called Hoover Commission, i.e., the Commission on Organization of the Executive Branch of the Government, headed by former President Herbert Hoover, which recently completed its studies.

One of the seven plans submitted to Congress proposes to transfer the Public Roads Administration from the Federal Works Agency to the Department of Commerce, and thus, as the President put it, "directly carries out" a Hoover Commission recommendation. Another of the plans proposes to make the chairman of the United States Maritime Commission the "chief executive and administrative officer" of the commission vesting in him "responsibility for the appointment of its personnel and the supervision and direction of their activities."

The law granting the reorganization authority to the President is Public Law 109, the bill out of which it came having been H.R.2361. Congressional action on the legislation was completed on June 16 when the Senate and House adopted the conference report reconciling their differing versions of the bill. No exemptions for any agencies are provided in the final version. Similar legislation which granted like authority to the late President Roosevelt for temporary periods contained exemption provisions which precluded the reorganization of several agencies, including the Interstate Commerce Commission, National Mediation Board, National Railroad Adjustment Board, and Railroad Retirement.

Attempts to include like exemptions in the present legislation were unsuccessful, although the House version would have required special procedures with respect to the reorganization of several agencies, including those listed above. The requirement, which was eliminated by the Senate-House conference committee, would have stipulated that a Presidential plan to change the set-up of an agency on the special-procedures list could not have been grouped with any other proposal—it would have had to come to Congress as a separate proposition.

Like that in the previous reorganization acts, the authority granted to the President under the present act is temporary. The expiration date is April 1, 1953, i.e., the act provides that no provision contained in a reorganization plan shall take effect unless the plan is transmitted to Congress before that date. The requirement that the plans be transmitted to Congress was designed to give the legislators an opportunity to veto them. In that connection the law provides that a plan proposed by the President shall take effect 60 days after it is submitted to Congress, if there has not been passed by either the Senate or the House a resolution expressing disapproval of the plan. While either branch of Congress can thus veto a Presidential proposal, there is another requirement that a resolution of disapproval requires for passage the affirmative vote of a majority of the "authorized membership" of the Senate or House, i.e., 49 senators or 218 representatives.

In his message proposing transfer of the Public Roads Administration, President Truman told Congress that the Commerce Department was the "appropriate location" for P.R.A., which is "primarily engaged in planning and financing the development of the highways which provide the essential facilities for motor transportation throughout the country." He added that P.R.A. "thus" comes "directly within the purpose of the Department of Commerce as defined by its organic act." Among the other plans submitted to Congress by the President are proposals to transfer the National Security Council and the National Security Resources Board to the Executive Office of the President; to create a Department of Welfare, headed by Secretary of Welfare, which would take over the functions of the Federal Security Agency; and to transfer to the Department of Labor the employment services of F.S.A. and the functions of the Veterans' Placement Service Board, which board would be abolished.

Although the general social security system would go to the proposed new Department of Welfare, the railroad retirement and unemployment systems would be unaffected. This would be in accord with a recommendation of the Hoover Commission which called for "retention of the Railroad Retirement Board in its present status." Neither would the Mediation Board nor Adjustment Board be affected by the foregoing plan involving the Labor Department. The Hoover Commission did not propose to change the present status of those boards, although its report on the Labor Department noted that the question of transferring N.M.B. to that department "for housekeeping purposes" was among those raised during the course of its investigations.

In its report on the Commerce Department, the Hoover commission recommended a grouping in that department of all major transportation activities of the federal government, except the regulatory functions of the independent commissions. Adoption of these recommendations would result in a transfer to Commerce of such I.C.C. functions as those relating to the formulation of railroad consolidation plans, car service, and safety (see *Railway Age* of March 12, page 95). As to the regulation of transportation agencies, the Hoover Commission rejected a suggestion of the "task force" which made its transport studies and thus failed to recommend that all federal regulatory functions be consolidated under one regulatory agency (see *Railway Age* of March 19, 95). In other reports, the commission recommended "immediate liquidation" of the government-owned Inland Waterways Corporation, operator of the Federal Barge Lines; and transfer of the rivers and harbors and flood control activities of the Army's Corps of Engineers to the Department of the Interior.

While Congress was acting to grant the general reorganization authority to the President, several other bills were introduced to carry out specifically many of the Hoover Commissions' recommendations.

Express Agency Seeks 10% Rate Increase

Rate increases calculated to increase its annual revenue by approximately $24,500,000 are sought by the Railway

Express Agency in a petition filed this week with the Interstate Commerce Commission. The petition asks for authority to increase first-class express rates by 10 per cent and to maintain second-class rates at 75 per cent of first class.

It is based on increases in wages which R.E.A. has granted since the time of its latest rate increase (see *Railway Age* of January 8, page 256). The annual-basis total of the wage increases was put at $15,200,000, including the estimated cost of the 40-hour week which becomes effective September 1 and additional payroll taxes.

The petition went on to say that the additional revenue is needed to enable R.E.A. to meet these added costs, to compensate the railroads "more adequately" for the handling of express traffic, and to maintain an "adequate express service." Examples given in the petition indicated that the proposal would increase the first-class, 100-mile rate from $2.48 to $2.73; the 500-mile rate from $4.90 to $5.39; and the 1,000-mile rate from $7.10 to $7.81.

The petition also seeks to have the proposed increases apply to intrastate as well as interstate express traffic. Meanwhile, the commission has issued an order in the No. 30082 proceeding requiring R.E.A. to increase its intrastate rates in Mississippi to the interstate basis in effect on December 9, 1948.

When it found in a recent report that the present level of the Mississippi rates resulted in discrimination against interstate commerce, the commission deferred entry of an order, thus giving the Mississippi Public Service Commission an opportunity to permit the adjustment. The present I.C.C. order was issued at the request of R.E.A., the latter having failed to obtain authority for the adjustment from the Mississippi commission.

Davidson Becomes Head of Locomotive Inspection Bureau

Edward H. Davidson on June 28 took his oath of office as director of the Bureau of Locomotive Inspection of the Interstate Commerce Commission. His appointment, which President Truman sent to the Senate on June 6, was unanimously confirmed by that body on June 23. It had been reported favorably on the previous day by the Senate committee on interstate and foreign commerce, which at the same time deferred action on the President's nomination of James E. Friend, a district inspector of the bureau, for the assistant directorship made vacant by the promotion of Mr. Davidson.

In assuming the directorship, Mr. Davidson became the successor of John M. Hall, whose retirement on May 31 was reported in the *Railway Age* of June 4, page 56.

The new director was born September 26, 1882, at Monroe, Conn., and his family later moved to Baraboo, Wis., where he attended the public schools. Mr. Davidson's first employment was with the Chicago & North Western as an engine wiper, and he was subsequently employed by the Baltimore & Ohio as machinist at Garrett, Ind., and by the Central of New Jersey in various capacities, including those of machinist, engineman, and enginehouse foreman.

Mr. Davidson left railroad service to become master mechanic for the Milliken Bros. Steel Corporation, but returned for approximately two years of service as a locomotive engineer on the Southern. When the Panama Canal was under construction, he was associated for 6½ years

E. H. Davidson

with the Transportation Department of the Panama Canal Commission. Mr. Davidson has been with the Bureau of Locomotive Inspection continuously since October 23, 1914, when he joined the staff as a district inspector. He continued in that capacity until May 16, 1940, when he became assistant chief inspector by appointment of the late President Roosevelt. The title of assistant chief inspector was subsequently changed to assistant director. Mr. Davidson is a member of the Brotherhood of Locomotive Engineers and the American Society of Mechanical Engineers, and is an honorary member of the Master Boiler Makers Association.

Justice Department Completes Reparations Cases Presentation

Presentation by the Department of Justice of evidence in support of the complaints on which it is basing five of the so-called government reparations cases was completed last week in 2½ days of hearings before the Interstate Commerce Commission's Division 4, consisting of Chairman Mahaffie and Commissioners Miller and Mitchell. When the department's presentation was concluded at the June 23 session, Chairman Mahaffie announced an adjournment of the hearings until November 28, when the commission will hear evidence offered on behalf of the railroads and interveners supporting the carriers. Counsel for the railroads agreed to serve all parties with copies of statements to be made by carrier witnesses on or before October 1 if that is "physically possible."

As noted in the *Railway Age* of June 25, page 102, where the opening sessions of last week's hearings were reported, the five cases, like 12 other pending proceedings, arose out of complaints whereby the federal government is seeking to recover alleged overcharges which it claims the railroads made on its shipments of various commodities during World War II. As noted also in last week's issue, the Justice Department introduced at those opening sessions some 90 witnesses who offered brief testimony and introduced voluminous exhibits relating to two of the proceedings involved in the hearings—No. 29735, wherein the complaint assails charges paid by the government on export freight stopped at storage-in-transit depots, and No. 29795, wherein the complaint assails charges paid as a result of the application of railroad "policing" rules to the government shipments moving to Pacific Coast ports for export.

The other three proceedings involved in the hearings are Nos. 29622, 29746, and 29805, wherein the complaints, in turn, assail rates paid by the government on its wartime shipments of soldiers' pack-carrier cases, aluminum airplane landing mats, and steel airplane landing mats. Generally these complaints are based on allegations that the rates or classification ratings on the commodities involved were unreasonable to the extent that they resulted in the application of charges higher than the contemporaneous rates on commodities which the complaints say were comparable from a transportation standpoint.

In the landing-mat cases, it is contended that the rates on the aluminum and steel mats should not have exceeded rates on manufactured iron and steel articles generally. In the pack-carrier-cases proceeding, like contentions are based upon differences between rates on the cases and rates applicable to other commodities which the government considers of the same general type. The Justice Department's evidence in support of the complaints in these three cases was framed along the foregoing lines, and its witnesses, who included transportation analysts on the department's staff and officers and civilian employees of the armed services, offered testimony and introduced exhibits making such comparisons.

These witnesses, like those in the storage-depot and policing-rules cases, were subjected to but brief cross-examination. The railroads plan to "show the infirmities" of the department's evidence by "affirmative evidence" of their own, the carriers' chief counsel, Kenneth F. Burgess, had said in his opening statement. Several attorneys from the legal staffs of the respondent roads were also on hand for the hearing, as was John S. Burchmore, counsel for the National Industrial Traffic League, which is among the several interveners who are supporting the railroads.

The Long Island Rail Road
COMPANY
8596 G
THE LONG ISLAND R. R. CO.
8596 G
Valid only when attached
RESTRICTED MONTHLY TICKET
NOT GOOD ON DAYS PUNCHED
S | Mon. | Tues. | W. | Thur. | Fri. | Sat.
Between Rockville Centre
And New York (Penna. Station)
NOT GOOD AFTER
Form RL-2
A 39765 1949
THE LONG ISLAND RAIL ROAD CO.
AUDITOR'S CHECK Not Good for Passage
To be Lifted by Conductor on First Presentation.
JUL 5 1949
Rockville Centre
Ret. E
New York (Penna. Station)
W
and
Restricted Monthly Ticket Not good on days punched
Mon. | Tues. | Wed. | Thur. | Fri. | Sat.
A 39765 Form RL-2

A new, permanent pass form of commutation ticket designed, according to Henry A. Weiss, traffic manager, "to streamline sales and collection for the benefit of all concerned," will be issued by the Long Island, starting in September. Beginning last week, the railroad is furnishing to each commuter a laminated ticket holder, provided with a metal clip, and containing an identification card bearing the passenger's photograph—to be taken at railroad expense—and, on the back, his or her name and address, description, signature and a serial number. As monthly or weekly tickets are sold, they will be attached to the holder with an adhesive backing; upon expiration, the ticket may be easily peeled off and a new one attached. Issuance of the holders to all the L. I.'s 100,000 commuters will require from six weeks to two months

Changed Purchasing Picture Concern of Railroad Buyers

The rapid change in the purchasing picture was one of the main concerns of the members of the Purchases & Stores Division of the Association of American Railroads meeting in 23rd annual session (June 27-29) at Chicago's Palmer House. H. E. Warren, chairman of the division, and vice-president, purchases and stores of the Gulf, Mobile & Ohio, said that there had been a complete reversal of the purchasing situation since the first of the year, and practically without a "transition period." Mr. Warren warned that this period of the buyer's market probably could cause railroad purchasing and stores men almost as much grief as had the last 6 or 7 years. He said that better stock keeping would help the railroads to keep from swelling their inventories of materials and supplies to proportions which could seriously handicap the carriers.

J. H. Aydelott, vice-president, operations and maintenance department, A.A.R., speaking at the first session, told the group that the 40-hr. week would hit the railroads hard. However, there were, he said, two fields in which the railroads definitely could cut their expenses to help meet this emergency. They could cut freight loss and damage and personal injury claims, which cost the railroads more than $270 million in 1948. The purchasing and stores departments, Mr. Aydelott said, could help immensely in reducing both these expenses, first, by hammering away at the idea of safety first, and, second, by setting an example for suppliers in methods of good loading, packaging and material handling.

Early reports of some of the committees, especially that on forest products, indicated that prices were stabilizing, and in some cases falling. One regional group reported that lumber prices for the better grades had dropped by about 10 per cent since the first of the year.

A full report of the division's meeting will be published in the *Railway Age* of July 9.

Freight Car Loadings

Loadings of revenue freight in the week ended June 25 totaled 802,941 cars, the Association of American Railroads announced on June 30. This was an increase of 153,590 cars, or 23.7 per cent, above the previous week (when the production of coal was largely suspended), a decrease of 85,427 cars, or 9.6 per cent, below the comparable week last year, and a drop of 43,200 cars, or 5.1 per cent, below the equivalent 1947 week.

Loadings of revenue freight for the week ended June 18 totaled 649,351 cars, and the summary for that week as compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, June 18

District	1949	1948	1947
Eastern	112,802	160,591	164,570
Allegheny	123,025	185,937	191,520
Pocahontas	21,259	75,930	73,199
Southern	95,392	139,723	133,226
Northwestern	130,038	135,387	135,284
Central Western	113,675	137,468	135,925
Southwestern	53,160	71,595	67,572
Total Western Districts	296,873	344,450	338,781
Total All Roads	649,351	906,631	901,296
Commodities:			
Grain and grain products	53,665	54,421	51,260
Livestock	7,174	10,835	12,186
Coal	36,855	204,559	190,685
Coke	10,112	14,878	14,212
Forest products	39,219	48,857	47,967
Ore	78,986	81,336	81,937
Merchandise l.c.l.	90,674	105,187	115,249
Miscellaneous	332,666	386,558	387,800
June 18	649,351	906,631	901,296
June 11	808,156	906,663	895,292
June 4	698,824	821,206	900,747
May 28	784,824	904,757	830,205
May 21	773,911	879,177	890,605
Cumulative total 24 weeks	17,288,857	19,181,864	20,136,028

In Canada.—Carloadings for the week ended June 18 totaled 74,522 cars, as compared with 72,764 cars for the previous week, and 80,827 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
June 18, 1949	74,522	30,917
June 19, 1948	80,827	34,559
Cumulative totals for Canada:		
June 18, 1949	1,738,328	760,007
June 19, 1948	1,784,340	850,149

A.A.R. Mechanical Division Convenes at Chicago

The 23rd annual meeting of the Mechanical Division of the Association of American Railroads was held at the Congress Hotel, Chicago, June 27-29, with its three-day program of addresses and committee reports carried out with little deviation from the schedule announced in the *Railway Age* of June 25.

Attendance at the opening session was approximately 400, of whom at least 200 were railroad men. Keynote speakers at that session, which was presided over by Chairman A. K. Galloway, general superintendent of motive power and equipment, Baltimore & Ohio, included G. Metzman, president, New York Central, and J. H. Aydelott, vice-president, Operations and Maintenance Department, A.A.R. Hon. W. J. Patterson, member, Interstate Commerce Commission, also scheduled to make an address, was unable to be present but sent his regrets and best wishes for the success of the meeting.

While no exhibit of railway equipment and supplies was held in conjunction with this meeting of the Mechanical Division and the Purchases & Stores Division (which met at the same time at the Palmer House, Chicago) the general committees of these two A.A.R. divisions were tendered an honorary luncheon on June 27 by President C. W. F. Coffin and a representative group from the Railway Supply Manufacturers' Association.

A full report of the proceedings at both the Mechanical and P. & S. Division meetings will be published in next week's *Railway Age*.

Five Railroad Supply Company Executives Honored by France

Five executives of companies manufacturing railroad equipment and supplies have been honored by France with presentations of the Legion of Honor. They are J. E. Dixon, president of the Lima-Hamilton Corporation; A. M. Hamilton, vice-president of the American Locomotive Company; R. A. Williams, president of the Standard Railway Equipment Manufacturing Company; Ralph Kelly, former president of the Baldwin Locomotive Works, and G. R. Carr, chairman of the board of the Dearborn Chemical Company.

Henri Bonnet, French Ambassador to the United States, presented the Le-

Whitman Assumes W. P. Presidency

Frederic B. Whitman, executive vice-president of the Western Pacific at San Francisco, Cal., became president of that road on July 1, in accordance with plans described in the *Railway Age* of October 9, 1948, page 55. He succeeds Harry A. Mitchell, who has headed the W. P. since January 1, 1949, and who is now retiring.

gion's insignias and diplomas to Messrs. Dixon, Hamilton, and Williams at a recent dinner in Washington, D. C., where like awards were also made to J. W. Marsh, a consulting engineer. The presentation to Mr. Carr, who was among the guests at the Washington dinner, had been made previously while he was on a trip to France. The presentation to Mr. Kelly, who was abroad at the time of the dinner, will be made this month by C. Bruneau, chief of the French National Railroads Mission in the United States.

In making the presentations, Ambassador Bonnet said they were a token of France's gratitude to those who have contributed to the delivery of railroad rolling stock to that country. The promptness of the deliveries and the quality of the equipment greatly expedited the rehabilitation of French railroads, he added.

Additional General News appears on pages 59 & 60.

EQUIPMENT AND SUPPLIES

SIGNALING

The **Maine Central** has ordered materials from the General Railway Signal Company for installation of absolute permissive type block signaling between Mattawamkeag, Me., and Wytopitlock, 17.6 mi. Type SA searchlight signals, type K relays, type K1 pole-mounted transformers and welded steel relay cases will be used.

Domestic Equipment Orders Reported in June

Domestic orders for 391 Diesel-electric locomotive units, 3 electric locomotives and 200 freight cars were reported in *Railway Age* in June. No orders for passenger cars were reported. The estimated cost of the locomotives is $53,727,200 and of the freight cars $840,000. The accompanying table lists the orders in detail.

During the first six months of 1949, *Railway Age* has reported domestic orders for 3,585 freight cars and 30 passenger cars, costing an estimated $17,880,000; and 481 Diesel-electric locomotive units, 13 steam and 7 electric locomotives, the total estimated cost of which is $73,629,800.

SUPPLY TRADE

James F. Clark has been elected treasurer of the **American Car & Foundry Co.**, to succeed **Lester A. Blackford**, retired.

D. L. Markle, Jr., has been appointed district sales manager in charge of the New Orleans, La., office of the **Youngstown Sheet & Tube Co.**, succeeding the late **Orville B. Ewing**. Mr. Markle has been associated with the company for almost 11 years.

The **Ansul Chemical Company** of Marinette, Wis., has opened offices in Los Angeles, Cal., Fresno and Oakland, and will offer sales and service for the Ansul dry chemical fire extinguishers in the Pacific Coast states formerly served by the **Snowden Chemical Company**, Modesto, Cal.

The **Link-Belt Company** has announced the removal of its Cleveland (Ohio) office to 314 Hanna building, Cleveland 15; of its Baltimore (Md.) office to 2315 St. Paul street, Baltimore 18; and of its Huntington (W. Va.) office to 1009 Fifth avenue, Huntington 1.

The **Electric Service Manufacturing Company** has announced the following changes in territorial representation: **Walter Knodle**, formerly at Dayton, Ohio, transferred to take charge of the Detroit, Mich., office, replacing **John Mahler**, resigned; **E. Schoffeld** assigned to assist Mr. Knodle; and **Warren Erbe**, formerly of the Philadelphia, Pa., office, transferred to succeed Mr. Knodle in the Ohio territory, with headquarters at Cincinnati, Ohio.

Frank C. Hasse, vice-president, mechanical department, of the **Oxweld Railroad Service Company**, a unit of **Union Carbide & Carbon Corp.**, at Chicago, retired on July 1. **Lem Adams**, also vice-president at Chicago, has assumed general supervision of the mechanical and construction departments in addition to his present duties. **Clarence R. Strutz** has been promoted to manager of the mechanical department and **R. W. Torbert**, assistant to vice-president at Chicago, has been appointed manager, maintenance of way and construction departments.

J. M. Davies, associate director of research of the **Caterpillar Tractor Company**, Peoria, Ill., has been appointed director of research, succeeding **C. G. A. Rosen**, who is recovering from a recent illness. Mr. Rosen will continue in an advisory capacity, to furthe. the development of Diesel engine design and performance and to aid in the advancement of the company's technical program. **Dr. L. A. Blanc**, assistant director of research, has replaced Mr. Davies.

Arthur H. Bunker has been elected president of the **Climax Molybdenum Company**. Mr. Bunker, who resigned as a general partner of Lehman Brothers on June 30, was founder and first president of the United States Vanadium Corporation; his business career also has included the presidency of the Carib Syndicate, Ltd., and the Colon Oil Corporation.

The **American Brake Shoe Company** has contracted to purchase a former war plant at 344 Vulcan street, Tonawanda, N. Y., from the War Assets Administration. The plant will be operated by the

Locomotives

Date	Purchaser	No.	Type	Builder
June 4	C.S.S. & S.B.	3	5,530-hp. electric freight	General Electric
June 4	G.N.	11	1,500-hp. D.-E. pass. units	Electro-Motive
		20	1,500-hp. D.-E. frt. units	Electro-Motive
		8	1,000-hp. D.-E. sw. units	Electro-Motive
		3	600-hp. D.-E. sw. units	Electro-Motive
		10	1,000-hp. D.-E. sw. units	American
June 25	C. & O.	2	1,500-hp. D.-E. rd.-sw. units	American
		40	1,000-hp. D.-E. rd.-sw. units	Electro-Motive
		20	1,500-hp. D.-E. rd.-sw. units	Electro-Motive
		26*	1,000-hp. D.-E. sw. units	Electro-Motive
		58	1,000-hp. D.-E. sw. units	American
		2	1,500-hp. D.-E. sw. units	American
June 25	R. F. & P.	10	2,250-hp. D.-E. pass. units	Electro-Motive
		20	1,500-hp. D.-E. frt. units	Electro-Motive
June 25	S. P.	112	1,500-hp. D.-E. frt. units	Electro-Motive
		1	2,250-hp. D.-E. pass. unit	Electro-Motive
		17	1,500-hp. D.-E. rd.-sw. units	Baldwin
		22	1,000-hp. D.-E. sw. units	American
June 25	Spokane Int'l	9	1,000-hp. D.-E. rd.-sw. units	American

Freight Cars

June 25	N.Y.C. & St. L.	200	50-ton box	American Car & Foundry

*6 of these will be used to make up two 3-unit 3,000-hp. switching locomotives.

company's Ramapo Ajax division, which plans to transfer certain operations from its Hillburn, N. Y., and Niagara Falls plants to the newly acquired plant. Also, effective July 31, the Atlanta, Ga., foundry of the Southern wheel division, will be closed because of the lack of orders. Some of the plant's personnel will be transferred to other company plants and plans to sell the plant property and its equipment are being made.

Gilbert B. Hauser has been appointed head of the railroad section of the development division of the **Aluminum Company of America.** Mr. Hauser was graduated from Pennsylvania State College in 1923, after which he completed a three-year course as a special apprentice with the Pennsylvania. He later was motive-power inspector for that road at

Gilbert B. Hauser

Altoona, Pa., Harrisburg, and New York. He joined the Aluminum Company of America in 1930. During World War II, Mr. Hauser was on loan to the Office of Emergency Coordinator to assist in building new defense plants. He returned to the company in 1944 and was appointed assistant chief engineer of the railroad section, at New Kensington, Pa., the position he held at the time of his recent appointment.

The **Westinghouse Electric Corporation** has announced the following executive changes: **L. E. Osborne,** vice-president, assigned staff supervision over all the company's manufacturing activities, including all matters of production and industrial relations: **James H. Jewell,** recently elected vice-president, appointed to take over staff supervision of all sales and marketing; **John K. Hodnette,** vice-president and head of the transformer division at Sharon, Pa., appointed general manager of industrial products, with headquarters at Pittsburgh, Pa.; **John M. McKibbin,** also a recently elected vice-president, appointed general manager of consumer products, with responsibility for operation and distribution of the appliance and the home radio divisions at Pittsburgh; **Tomlinson Fort,** formerly manager of central station sales activities, appointed manager, apparatus sales department; **William W. Sproul,** formerly transformer sales manager, appointed sales manager, industrial products; and **Royal C. Bergvall,** assistant to the vice-president since 1938, appointed engineering manager, industrial products.

OBITUARY

William B. Wait, president of the Valve Pilot Corporation, died on June 26. Mr. Wait was born on July 13, 1872, in New York, and educated in the public schools there. He was graduated from the Columbia University Law School in 1894, was admitted to the bar in the same year, and had been president of Valve Pilot since 1927. Mr. Wait was a navy veteran of the Spanish-American war and of World War I. He was a member of the New York Naval Militia from 1896 until 1922, and after the war was commander of its first battalion, with the rank of captain.

ABANDONMENTS

Application has been filed with the Interstate Commerce Commission by:

Chicago, Rock Island & Pacific.—To abandon an 18.5-mi. branch from Branch Junction, near Haileyville, Okla., to Pittsburg. The application stated that losses from operation of the line are a "substantial drain" on the applicant, and that lack of traffic "indicates want of public convenience and necessity" requiring further operation.

CAR SERVICE

Second Revised I.C.C. Service Order No. 95, effective from July 1 until June 30, 1949, has supplanted Revised Service Order No. 95 under which C. W. Taylor, manager of the Refrigerator Car Section, Car Service Division, Association of American Railroads, has functioned as commission agent to control the distribution of refrigerator cars. Under the new order, Mr. Taylor continues as commission agent, but he no longer has authority to issue reefer-distribution on its behalf; his function now is to "provide the commission with current information, through its director of the Bureau of Service, with respect to the supply of and the need for refrigerator cars in all sections of the United States." Also, he is required to advise the commission "concerning measures which will reduce the time of loading and unloading refrigerator cars or increase the efficiency and economy of such cars' utilization, operations and movement."

I.C.C. Service Order No. 817, which authorizes the use of giant refrigerator cars at freight rates applicable to the same commodities loaded in standard reefers, has been modified by Amendment No. 4, which set back the expiration date from July 10 to October 31.

Sixth Revised I.C.C. Service Order No. 104 and Revised I.C.C. Service Order No. 822 expired on June 30. Tariffs have been modified to permit continuance of the practices authorized by the former order, which provided for the substitution of RS type refrigerator cars for box cars ordered for westbound carload shipments. However, no such tariff changes were made to permit continuance of practices authorized by No. 122, which provided for the substitution of two or three refrigerator cars in lieu of one box car ordered for westbound shipments to points in the state of Washington, and to Portland, Ore.

FINANCIAL

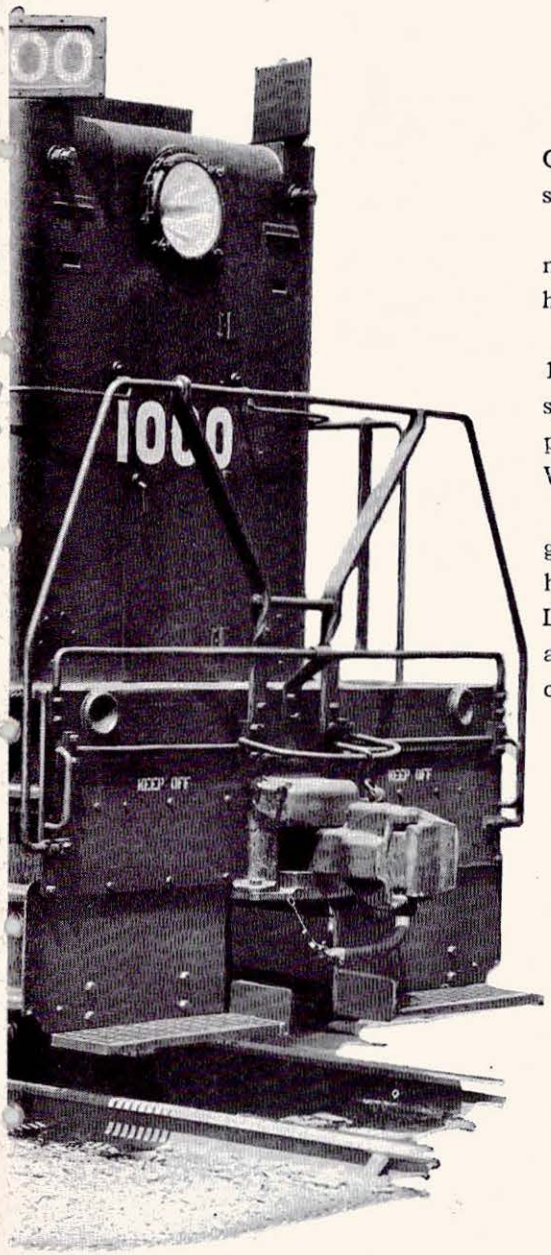
Akron Union Passenger Depot.—*Bonds.*—This company has asked the Interstate Commerce Commission for authority to issue $2,000,000 of first mortgage series A bonds, the proceeds of which will be applied toward the cost of constructing a new passenger station in Akron, O. The bonds will be dated July 1, will bear interest at a rate to be determined through competitive bidding, and will mature July 1, 1974. Liability for the bonds will be assumed jointly by the Pennsylvania and Baltimore & Ohio as guarantors. The bonds will be redeemable for purposes other than the sinking fund in amounts not less than $200,000 on July 1, 1951, or on any interest date thereafter at 104 per cent, of principal amount, to and including January 1, 1957, and on any interest date thereafter at principal plus ¼ of 1 per cent for each year between redemption date and July 1, 1972. For sinking fund purposes, the bonds will be redeemable at 102 from July 1, 1951 until July 1, 1956; thereafter, at principal plus ⅛ of 1 per cent for each year between the redemption date and July 1, 1971, and at 100 thereafter. The present application supplants a previous one which was dismissed by the commission at the applicant's request (see *Railway Age* of May 28, page 56).

Des Moines & Central Iowa.—*Reorganization.*—Division 4 of the Interstate Commerce Commission has authorized this road's reorganization manager to consummate its plan of reorganization as approved by the commission and the court (see *Railway Age* of October 2, 1948, page 69). The consummation will involve transfer of the properties from the Des Moines & Iowa Central Railroad to a new company, the Des Moines and

News Department continued on second left-hand page

HERE

IT IS !!!



On June 14th the new Lima-Hamilton 1000-hp diesel switcher was shown for the first time at Lima, Ohio.

To date, 31 of these switchers have been sold — 30 to major Class I railroads and one to a steel mill. Deliveries have already started.

The diesel is our own — a heavy-duty 8-cylinder 4-cycle 1200-hp engine that has been designed from saddle up specifically for switcher service. A full 1000 brake horsepower is available for traction. Electrical equipment is Westinghouse.

You're going to hear a lot about this switcher — about its get-up-and-go and the way it handles — about the way parts have been located so they are easy to get to. The traditional Lima-Hamilton fineness of design and manufacture, so long a characteristic of Lima steam locomotives, has now been carried into the diesel-electric field.

LIMA HAMILTON CORPORATION

DIVISIONS: *Lima, Ohio* — Lima Locomotive Works Division; Lima Shovel and Crane Division. *Hamilton, Ohio* — Hooven, Owens, Rentschler Co.; Niles Tool Works Co. *Middletown, Ohio* — The United Welding Co.

PRINCIPAL PRODUCTS: Locomotives; Cranes and shovels; Niles heavy machine tools; Hamilton diesel and steam engines; Hamilton heavy metal stamping presses; Hamilton-Kruse automatic can-making machinery; Special heavy machinery; Heavy iron castings; Weldments.

Central Iowa Railway Company, and assumption of liabilities and issuance of securities by the latter. The securities to be issued will include $571,400 of first-mortgage, 4 per cent, income bonds, series A, due January 1, 2024, and $428,550 of common stock, consisting of 17,142 shares of the par value of $25 each.

Huntingdon & Broad Top Mountain.—*Trustee.*—Division 4 of the Interstate Commerce Commission has conditionally ratified the federal district court's appointment of C. Stevenson Newhall as trustee of this road in the reorganization proceeding which it launched recently under the provisions of section 77 of the Bankruptcy Act. Mr. Newhall, who is chairman of the board of directors of the Pennsylvania Company for Banking and Trusts and director of several other companies, including the Reading, has been president of the H.&B.T.M. since 1939, and has been serving as a member of a protective committee of holders of its consolidated mortgage bonds. A requirement that he resign from that committee is one of the conditions attached by the commission to its ratification of his appointment as trustee. The other condition stipulates that, while serving as trustee, Mr. Newhall shall receive no compensation from the debtor company, except that which is fixed by the court, with commission approval, for his services in that position. The bondholders' committee of which Mr. Newhall has been a member favored ratification of his appointment, as did unsecured creditors (including the Pressed Steel Car Company), 12 labor organizations, and some of the principal shippers on H.&B.T.M. lines. Ratification was opposed by another bondholders' committee and by two bondholders individually. The commission said that there was "no doubt" as to the existence of "conflicts of interests" among several of the positions held by Mr. Newhall. It then went on to indicate that its favorable action was based on what it considered offsetting factors, such as Mr. Newhall's "many qualifications" for the trusteeship, the fact that his appointment was "overwhelmingly" supported by both secured and unsecured creditors of the debtor and other parties in interest, and the "persuasive reasons" given by the court for its action in making the appointment.

Lehigh Valley.—*Modification of Securities.*—The Interstate Commerce Commission has authorized this road to carry out its plan for modifying some of its outstanding securities, and has thus cleared the way for the first consummation by a large road of a modification plan framed under provisions of the so-called Mahaffie Act, now section 20b of the Interstate Commerce Act. The commission's report fixed August 1 as the effective date of the plan, meanwhile making the required finding that the proposed modifications had been assented to by holders of at least 75 per cent of each class of securities involved (see *Railway Age* of May 14, page 69). A previous commission report in the proceeding, Finance Docket No. 16184, authorized submission of the revamp plan to the interested security holders (see *Railway Age* of February 19, page 61). The plan, as that previous report described it, was designed "to meet the problems presented by approaching maturities and by heavy fixed charges." The Lehigh was faced with maturities over the next eight years of approximately $45,000,000 of bonds, and in 11 of the past 20 years it had failed to earn its fixed charges, including rent for leased lines.

Under the plan, none of the road's bond issues will mature until 1969, and thereafter maturities will be spaced at 5-year intervals until 1994. The largest maturity prior to 2003 will be one of $14,711,000 in 1974. The principal modification will be that affecting the Lehigh's junior issue of bonds, i.e., $71,754,000 of general consolidated mortgage bonds maturing in 2003. These will have three-fourths of their interest, which is now all fixed, made contingent on earnings, the bondholders receiving some common stock in addition to the new bonds. The plan was outlined in detail in the February 19 issue mentioned above.

New York, Chicago & St. Louis.—*New Director.*—Russell L. White, president of the Indiana National Bank and chairman of the White Baking Company, has been elected to this road's board of directors to succeed Benedict Crowell, who has resigned because of failing health.

New Securities

Application has been filed with the Interstate Commerce Commission by:

New York, Ontario & Western.—To issue $3,323,000 of 3 per cent equipment trust certificates to be delivered to the Reconstruction Finance Corporation in exchange for certificates of three previous issues. The latter, which are 1941, 1945 and 1947 issues, would be consolidated and extended by the new issue. The application also seeks commission approval of the proposed rearrangement of the R.F.C. loan to the new basis. The new certificates would be dated June 1 and would be amortized quarterly from March 1, 1950, to and including June 1, 1959.

Average Prices Stocks & Bonds

	June 28	Last week	Last year
Average price of 20 representative railway stocks	36.16	36.63	54.78
Average price of 20 representative railway bonds	84.17	83.94	91.29

Dividends Declared

East Pennsylvania.—$1.50, semiannual, payable July 19 to holders of record July 1.

Illinois Terminal.—20¢, quarterly, payable August 1 to holders of record July 11.

Lake Superior & Ishpeming.—25¢, payable July 15 to holders of record July 8.

Massawippi Valley.—$3.00, semiannual, payable August 1 to holders of record July 1.

Pittsburgh, Cincinnati, Chicago & St. Louis.—$2.50, semiannual, payable July 20 to holders of record July 9.

Richmond, Fredericksburg & Potomac.—dividend obligation, $3.00, semiannual, payable June 27 to holders of record June 17.

Tunnel R. R. (St. Louis).—$3.00, semiannual, payable July 1 to holders of record June 15.

Wheeling & Lake Erie.—4% prior lien, $1.00, quarterly, payable August 1 to holders of record July 22.

Investment House Publications

[The surveys listed herein are, for the most part, prepared by financial houses for the information of their customers. Knowing that many such surveys contain valuable information, *Railway Age* lists them as a service to its readers, but assumes no responsibility for facts or opinions which they may contain bearing upon the attractiveness of specific securities.]

Baker, Weeks & Harden, One Wall st., New York 5.

Erie Railroad. Address by R. E. Woodruff before the New York Society of Security Analysts, May 20.

Commercial and Financial Chronicle, 25 Park place, New York 8.

Evaluating Railroad Income Bonds, by Walter F. Hahn, Smith, Barney & Co. Reprinted from the June 2 issue of the Commercial and Financial Chronicle.

R. W. Pressprich & Co., 68 William st., New York 5.

Selected Data for Major Railroads; Funded Debt, Capital Expenditures, Working Capital, 1941-1948.

Smith, Barney & Co., 14 Wall st., New York 5.

Southern Pacific System. Railroad Bulletin No. 30 (June 9).

Vilas & Hickey, 49 Wall st., New York 5.

Lehigh Valley General Consolidated Mortgage Bonds (June 1).

RAILWAY OFFICERS

EXECUTIVE

James T. Webster has been appointed assistant to vice-president—traffic and advertising manager of the New York

James T. Webster

Central system at New York, succeeding **Mac G. Collins,** who has been appointed manager of concessions. Mr. Webster was born at Chicago in 1909 and was edu-

News Department continued on next left-hand page

did you hear the one about the

Two Traveling Men?

Once there were two traveling men, who boarded separate trains for an overnight journey. One got off next morning full of pep and bounce, ready for a big day's work. "Slept like a top," he reported. "Smoothest ride I ever had."

The other emerged heavy-eyed and pessimistic. "What a ride!" he said. "Almost got jolted out of my berth. Hardly slept a wink." And the point of the story is—which one was *your* passenger? . . . and which one will *stay* your passenger?

• • • • •

If you are now planning on any new trains for de luxe service, you are probably giving the question of passenger comfort a lot of thought. Brakes can't, of course, provide the complete answer—but on a number of roads Westinghouse HSC Electro-pneumatic brake equipment has been a big help in smoothing the ride, and improving and maintaining schedules. Application and release impulses are transmitted simultaneously to every car on the train . . . the Speed Governor Control automatically proportions brake pressure to speeds . . . the Decelostat instantaneously softens braking effort if wheel slip impends.

Westinghouse Air Brake Co.

WILMERDING, PA.

cated at Dayton, Ohio, and Lake Forest, Ill. He attended Ohio State University and was graduated from Northwestern University in 1932 with a bachelor of Science degree in commerce. Entering railroad service with the New York Central at Chicago in 1933 as a clerk in the freight traffic department, he was transferred to Detroit in 1934 and appointed research assistant in the office of the president at New York in 1942. Mr. Webster became research representative in the passenger traffic department in 1943 and in 1947 was appointed assistant to vice-president—traffic, the position he held at the time of his present promotion.

Carl L. Jellinghaus, vice-president of the Michigan Central (New York Central System) at Detroit, Mich., has been appointed vice-president—executive department of the New York Central System, with headquarters at New York.

Eugene M. Smith, general counsel of the New York, Chicago & St. Louis, has been appointed vice-president and general counsel, with headquarters as before at Cleveland, Ohio. Mr. Smith was born on June 7, 1891, at Chicago, and entered railroad service with the New York Central in the land and tax depart-

Eugene M. Smith

ment on January 1, 1909. He joined the N.Y.C.&St.L. as an attorney on July 15, 1917, and was named general land and tax attorney in September, 1923. In June, 1943, he was promoted to general attorney and in December, 1944, he became assistant to the general counsel. Mr. Smith has been general counsel since November, 1947.

FINANCIAL, LEGAL & ACCOUNTING

G. F. Norton, assistant to the treasurer of the Pennsylvania, has been promoted to assistant treasurer, with headquarters as before at Philadelphia, Pa., succeeding **Harry Hurst,** retired.

S. F. Masman, assistant chief claim agent of the Central region of the Pennsylvania, has been promoted to chief claim agent, with headquarters as before at Pittsburgh, Pa., succeeding the late **H. J. Skeeters.**

Herbert Coughenour has been appointed general paymaster of the Atlantic Coast Line at Wilmington, N. C., and **R. M. Floyd** has been appointed cashier there.

Joseph F. Tripician, chief clerk in the office of the president of the Pennsylvania, has been promoted to assistant secretary of the company, with headquarters at Philadelphia, Pa.

OPERATING

William Thomas Rice, superintendent of the Potomac yard of the Richmond, Fredericksburg & Potomac, at Alexandria, Va., has been appointed to the newly-created position of superintendent of the road, with headquarters at Richmond, Va., reporting to the general superintendent.

TRAFFIC

R. M. McKee has been appointed assistant to coal traffic manager of the Chicago & Eastern Illinois, at Chicago.

J. F. Sullivan, passenger traffic manager of the Southern Pacific Lines in Texas and Louisiana, with headquarters at Houston, Tex., will retire on July 31, after 50 years of service, and will be succeeded by **Hugh H. Gray,** general passenger agent at El Paso, Tex. **James E. Bledsoe,** assistant passenger traffic manager at Houston, Tex., will replace Mr. Gray and will be succeeded by **A. P. Hardy.**

MECHANICAL

W. J. Jarrett, master mechanic of the North Florida division of the Seaboard Air Line at Jacksonville, Fla., has been transferred to the Virginia division at Raleigh, N. C., replacing **Henry Ballenberger,** who is leaving the Seaboard after 48 years of service. **J. G. Carlton,** master mechanic at Hamlet, N. C., has been transferred to the North Florida division at Jacksonville, to succeed Mr. Jarrett.

L. E. Dix, mechanical superintendent of the Texas & Pacific, at Dallas, Tex., will retire on August 1, after 51 years of railroad service.

ENGINEERING & SIGNALING

James F. Leonard, engineer of bridges and buildings of the Central region of the Pennsylvania at Pittsburgh, Pa., retired on July 1, in accordance with the retirement rules of the company. Mr. Leonard was born at Salisbury, Md., and was graduated from Lehigh University with a degree in civil engineering. He entered the service of the P.R.R. in 1905 as a draftsman and was promoted to assistant engineer of bridges in 1910. During World War I Mr. Leonard served as an officer in the Engineer Corps of the American Expeditionary Forces, returning to the Pennsylvania in 1919. He was promoted to engineer of bridges and buildings in 1923 and served in that position until last January, when he was granted a leave of absence.

H. C. Lorenzen, signal engineer and superintendent of telegraph, Chesapeake & Ohio, Pere Marquette district, at Detroit, Mich., retired on July 1.

OBITUARY

Francis J. Osborne, assistant general freight agent of the New York Central at Albany, N. Y., died on June 24 at St. Peter's hospital in that city, at the age of 59.

William R. H. Mau, assistant general purchasing agent of the Missouri Pacific Lines at St. Louis, Mo., died on June 23, at the age of 56. A photograph and biographical sketch of Mr. Mau appeared in the *Railway Age* of January 15, in connection with his appointment as assistant general purchasing agent.

Roscoe James Doss, vice-president in charge of traffic of the Atlantic Coast Line at Wilmington, N. C., died at his home in that city on June 26 of a heart attack, at the age of 65. Mr. Doss was born at Canton, Ga., on March 30, 1884, and was graduated from the Etowah Military Institute. He entered railroad service at Canton, with the Atlantic, Knoxville & Northern (now part of the Louisville & Nashville) in 1900 and joined the Atlantic Coast Line in 1913 as chief rate clerk at Savannah, Ga. Three years later Mr. Doss went to Wilmington where he served as assistant to general freight agent from 1916 until the A.C.L. was taken over by the government. During the period of federal control he was attached to the Southern Rate Commission of the United States Railroad Administration. He became assistant general freight agent of the Coast Line in 1920; general freight agent in 1926; assistant freight traffic manager in 1930; freight traffic manager in 1935; general freight traffic manager in 1940, and general traffic manager in 1941. Mr. Doss was appointed vice-president in charge of traffic in 1942. He was also vice-president of the Charleston & Western Carolina; traffic manager of the Columbia, Newberry & Laurens and the Rockingham, and director and traffic manager of the East Carolina.

Alan L. Kline, who retired in 1945 as general manager of the New York, Susquehanna & Western at Paterson, N. J., died on June 21 in a hospital in Lucerne, Switzerland. Mr. Klein began his railroad career with the Erie in 1900 as a yard clerk and was serving as division superintendent when he left the Erie to become general manager of the Susquehanna in 1940, which position he held until his retirement five years later.

R. R. Presidents Oppose Bills

(Continued from page 49)

well-intentioned, which is necessarily not responsible for the results, which its decisions or rulings create." Also, he had this advice for railroad employees:

"I venture the assertion that if employees would give wholehearted attendance at and support to the company's safety meetings and efforts in the Safety First Movement, much greater safety would ensue than presently exists. If they would discontinue their efforts toward unproductive make-work laws and schemes, under the guise of safety, and support the company before the I.C.C. and state commissions in their efforts to discontinue unproductive passenger train service, railroad service on the whole would be much improved and funds for improvements which add to safety would be more available."

"A 'Make-Work' Proposition"—White

President White of the Lackawanna emphasized first how the railroad industry is now "pretty much circumscribed by regulations of various kinds." His supporting "bill of particulars" for that statement was a list of 15 aspects of current regulation which was "not all-inclusive," but which was compiled to indicate "the extent to which managerial function on the railroads is already restricted." He added that it was even more restricted than Dr. Harold Moulton of the Brookings Institution realized when he said that the only function left to railroad management were the scheduling and operation of trains, personnel management, and purchasing.

"Management," Mr. White said, "is not entirely free from interference even in the scheduling of its trains or in the management of its personnel. I might also add that in the matter of purchasing it is subject to certain restraints imposed by the Clayton Act. Of the three matters mentioned by Dr. Moulton, therefore, it is only with respect to the actual operation of our trains that we are as yet free from restrictions, and S.238 proposes to take away from us even that jurisdiction and responsibility—and I stress the word responsibility."

So far as the bill relates to telegraph and telephone systems, Mr. White "suspects" that it is "largely a make-work proposition"; he knows of "no safety element involved in connection with such communications." He went on to say that even if these "suspicions" are not correct, the telegraph and telephone provisions of the bill, "together with the other features relating to rules, regulations and practices with respect to the operation of trains," could nevertheless become "very much a make-work proposition." And, Mr. White added, "if that opportunity exists, let no one think it will not be pressed for all it is worth."

With respect to radio train-communication, he went on, the bill presents the

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question of dealing with "something that has yet a good way to go before it can be regarded as an established railroad operating facility." He called this situation "quite different" from that which existed in 1937 when the Signal Inspection Act was passed. "Block signal systems and interlocking devices," he said, "had been in use for many years and their importance to the safety of train operations had long been well recognized before the commission was authorized to require their installation. They were in no sense experimental."

Coming to the bill's operating-rules provisions, Mr. White said that, "interpreted narrowly," these provisions would be "exceedingly broad," and, "interpreted broadly," they would be "practically all-inclusive." He added that, if such provisions are enacted, "our managerial function will have been usurped." And he pointed out that such a law, however broadly interpreted, "will have no beneficial effect upon the most important factor with which we have to deal in connection with safety—the human element." In the latter connection, Mr. White also said that the I.C.C.'s report of accidents for the fiscal year 1948 showed that during that year the Bureau of Safety investigated 80 train accidents which occurred in Class I roads; and that 56 of them were found to have been due to negligence of employees.

The Lackawanna president characterized as "nonsense" a statement of "one labor witness before the House committee" who said that the proposed legislation should be enacted "so that your minds and mine may be free from that fear that perhaps the train you and I are riding on may be the next to become involved in a serious accident." From "statistics of insurance companies," Mr. White said, "it is known" that "it is safer for a passenger to ride on a train than to remain in his home."

He went on to explain how railroads have always given much attention to the formulation and revision of their operating rules, and to the promotion of safety. The explanation ended with this warning: "If you take away the jurisdiction of management and circumscribe it with rules and regulations evolved from bureaucracy, you will destroy both incentive and the sense of responsibility." In summing up with an expression of his general view that the proposed legislation would not promote safety, but would have the "opposite effect," Mr. White further warned that "it requires but little additional regulation to strangle the life out of an industry which is already as highly regulated as is the railroad industry."

Hood, Fort Oppose Bills

The presentation of President Hood of the Short Line Association was a brief statement registering the opposition of that organization's 320 member roads to enactment of the proposed legislation. "The short line members of this association," he said, "vary in length from one to 2,500 miles, in number of crews employed from one to several hundred, and in density of traffic accordingly. There is no possibility of a regulatory body acquainting itself in sufficient detail as to the practices necessary for economical and safe operation of each of these properties to warrant that regulatory body substituting its judgment for that of the management responsible to the public, to the employees and to the owners."

Vice-President Fort of the A.A.R. told the Senate subcommittee that the railroads had brought to the hearings men with long experience in the field of operations in order to show that the proposed legislation was "unprecedented" and "ill-advised." He also said that there was no justification for government interference with business, except for the correction of an "evil," but the railroads' safety record is proof that there is here no "evil" to correct. The A.A.R. vice-president went on to refer to the fact that the railroads face substantially higher wage costs on September 1, when the 40-hour week for non-operating employees become effective. The proposed legislation, he added, would further increase railroad costs, thus resulting in lower earnings as well as "less safety."

In closing last week's series of hearings, Senator Myers said that a further hearing would be held later for the purpose of hearing Commissioner Patterson. Meanwhile, Senator Reed, Republican of Kansas, had said that he desired to question the commissioner and members of the commission's legislative committee with respect to the bill.

Fire Destroys B. & O. Pier

A fire of undetermined origin destroyed a coal pier owned by the Baltimore & Ohio at St. George, Staten Island, N. Y., on June 26, causing damage estimated by H. I. Walton, superintendent of the B.&O.'s New York Terminal region, at $500,000. A car float, a steam hoist and 12 freight cars were also destroyed by the fire, but neighboring piers and coal barges moored beside the burned pier were saved by municipal fireboats and railroad and other tugboats.

A.A.R. Members Vote to Raise Refrigerator Car Rentals

Member roads of the Association of American Railroads have voted in favor of the proposal to increase mileage rates on refrigerator cars which the A.A.R. board submitted to them recently by letter ballot. The vote, announced by the board after its regular monthly meeting in Washington, D. C., on June 24, was 85.3 per cent in favor of the proposal which is to raise the rates as follows: On general-purpose refrigerator cars, from 2.5 cents to 3 cents per mile; on "RB" type reefers, from 2.2 cents to 2.5 cents; and on the "LRC" type, from 2 to 3 cents. It was stated at the A.A.R. that present plans contemplate making the new rates effective August 1.

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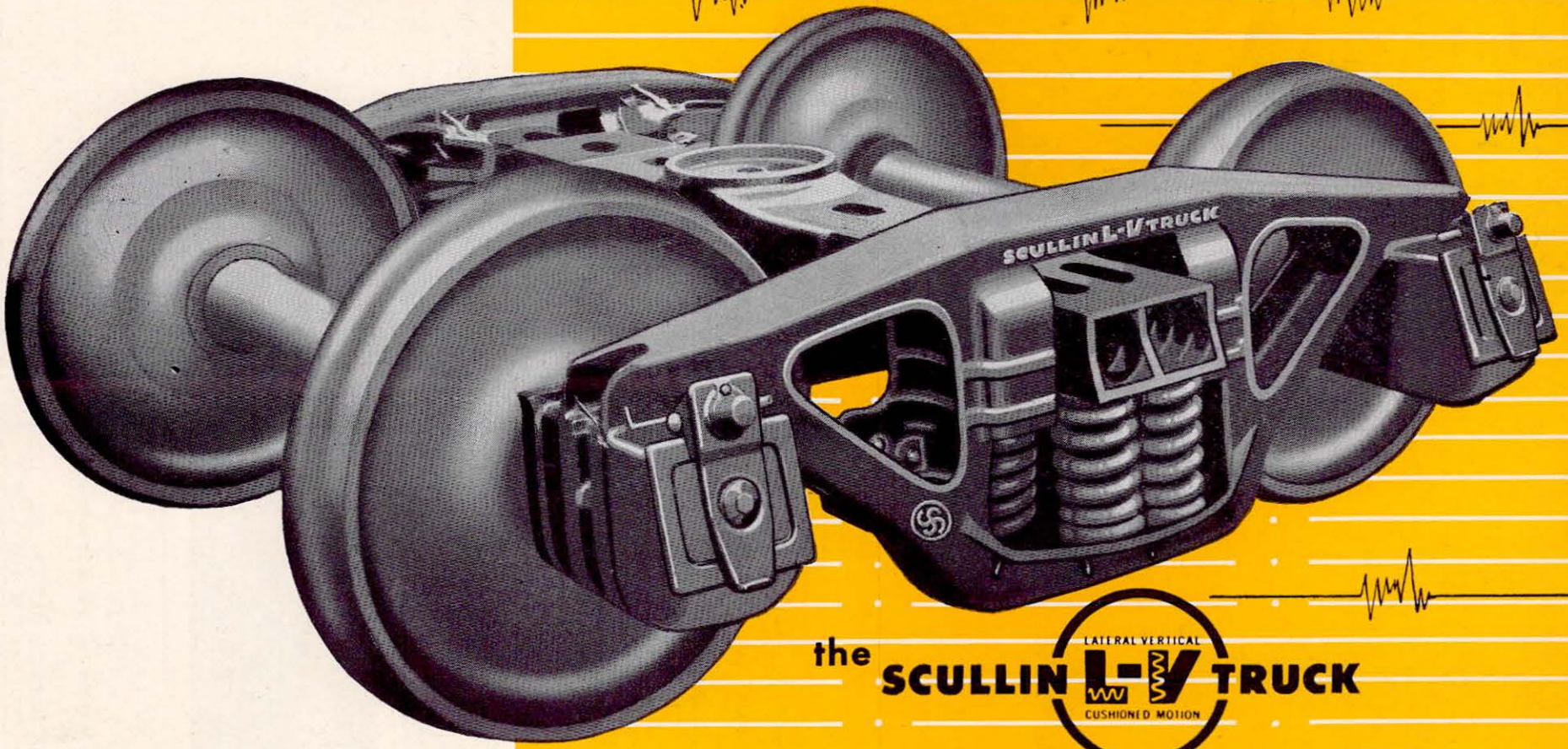

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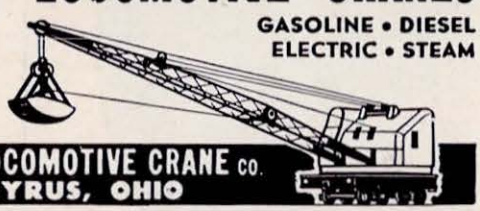

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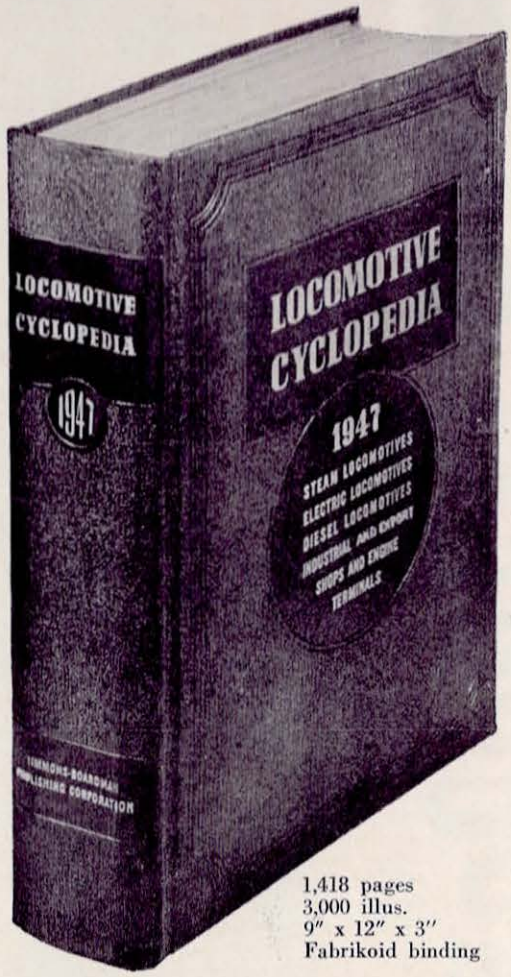

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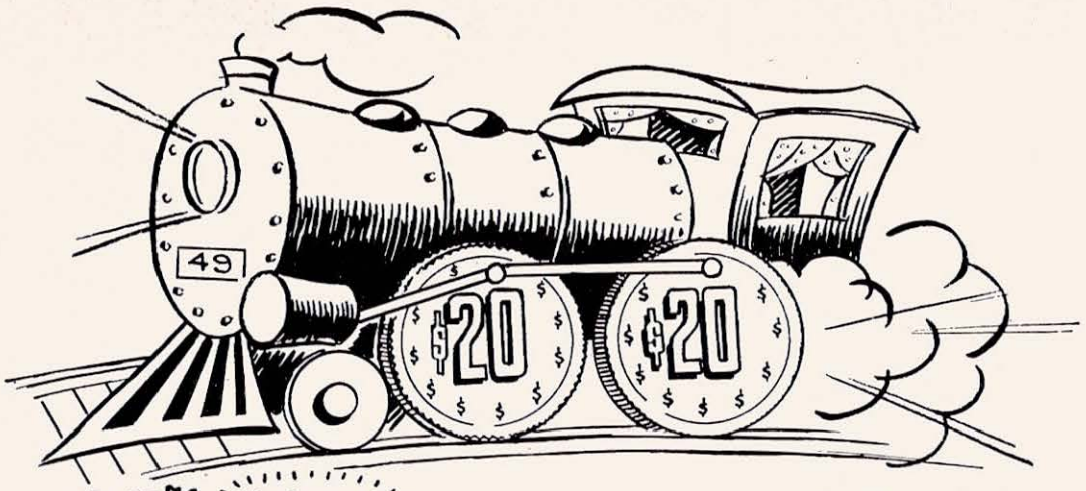

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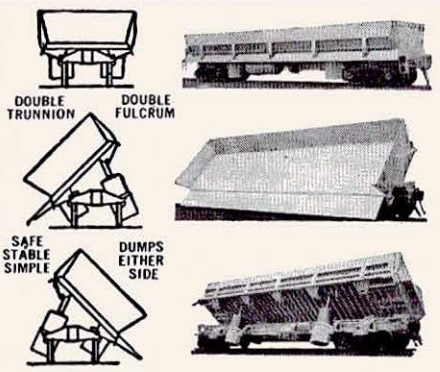

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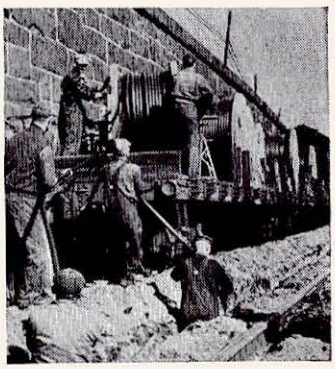

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IN THIS ISSUE

American Hair & Felt Co. 4
American Steel Foundries.. 5
Association of Manufacturers of Chilled Car Wheels 2
Automatic Electric Sales Corporation 10

Baldwin Locomotive Works, The, Standard Steel Works Division 14
Bethlehem Steel Company 3

Carey Co., Inc., Thomas F. 65
Classified Advertising 64, 65
Collins Co., The Walton R. 62

Differential Steel Car Co. 63

Edgewater Steel Company 6
Electro Motive Division, General Motors Corporation .....Front Cover

Fairbanks, Morse & Co. 67

General Railway Signal Company .. Back Cover
Get Together Department 64, 65
Gold Car Heating & Lighting Co. 62

Hooven, Owens, Rentschler Co. 54, 55
Hunt Company, Robert W. 65
Hyman-Michaels Company 62

International Correspondence Schools 65
International Nickel Company, Inc., The .. 9

Iron & Steel Products, Inc. 64

Lima Hamilton Corporation 54, 55

Minneapolis & St. Louis Railway, The 8
Motorola Inc. 7

Niles Tool Works Co. 54, 55

Ohio Locomotive Crane Co., The 62
Ohio Steel Foundry Co., The 62
Okonite Company, The 63

Penetryn System Inc., The 62
Peoples Iron & Metal Co. 65
Purdy Company, The 63

Railway Education Bureau, The 65
Rust-Oleum Corporation 59
Ryerson & Son, Inc., Joseph T. 66

Scullin Steel Co. 61
Simmons-Boardman Publishing Corporation 62, 64
Sprague Devices, Inc. 60
Standard Steel Works Division, The Baldwin Locomotive Works 14

Union Switch & Signal Co. 12

Westinghouse Air Brake Co. 57
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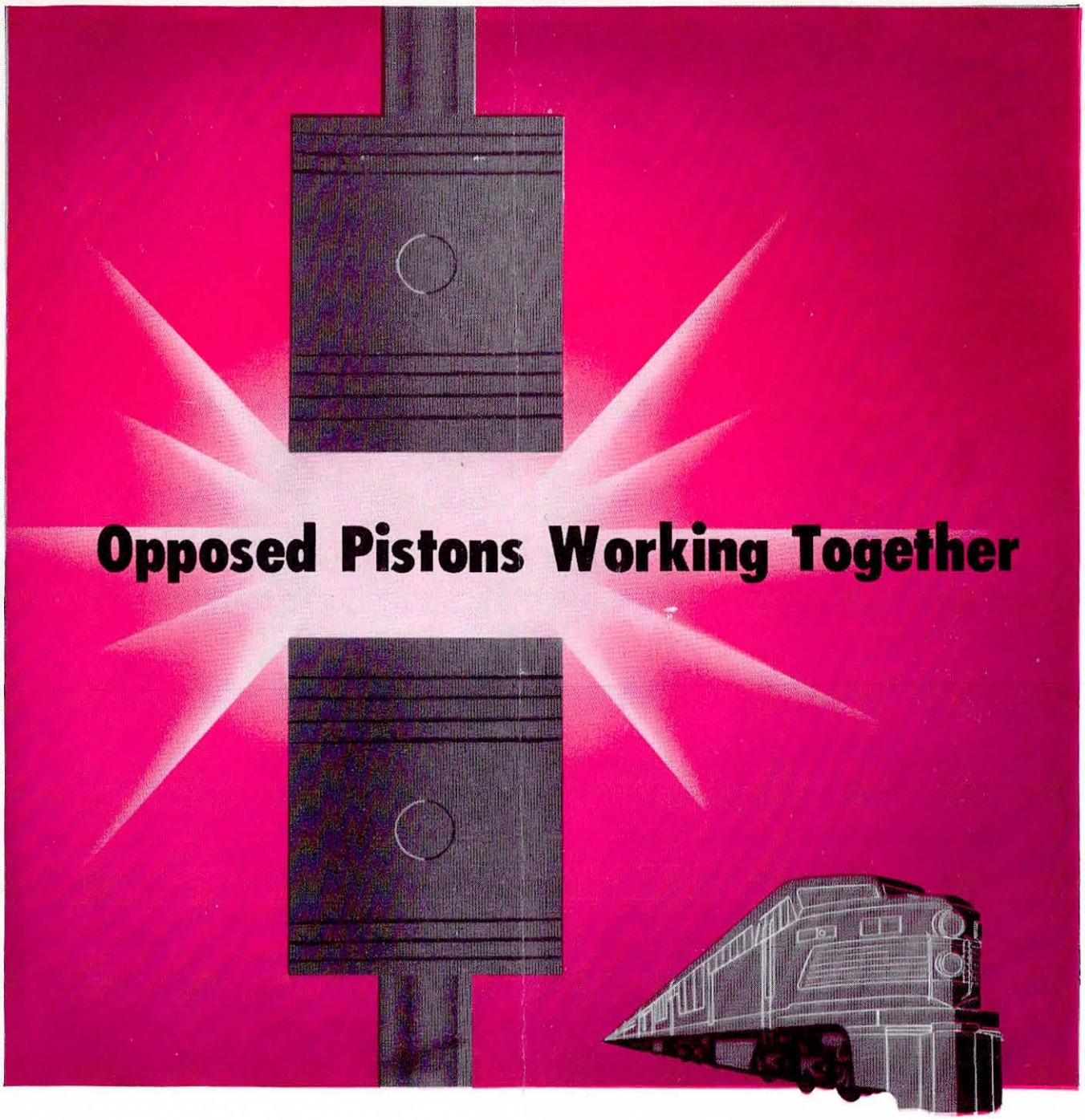

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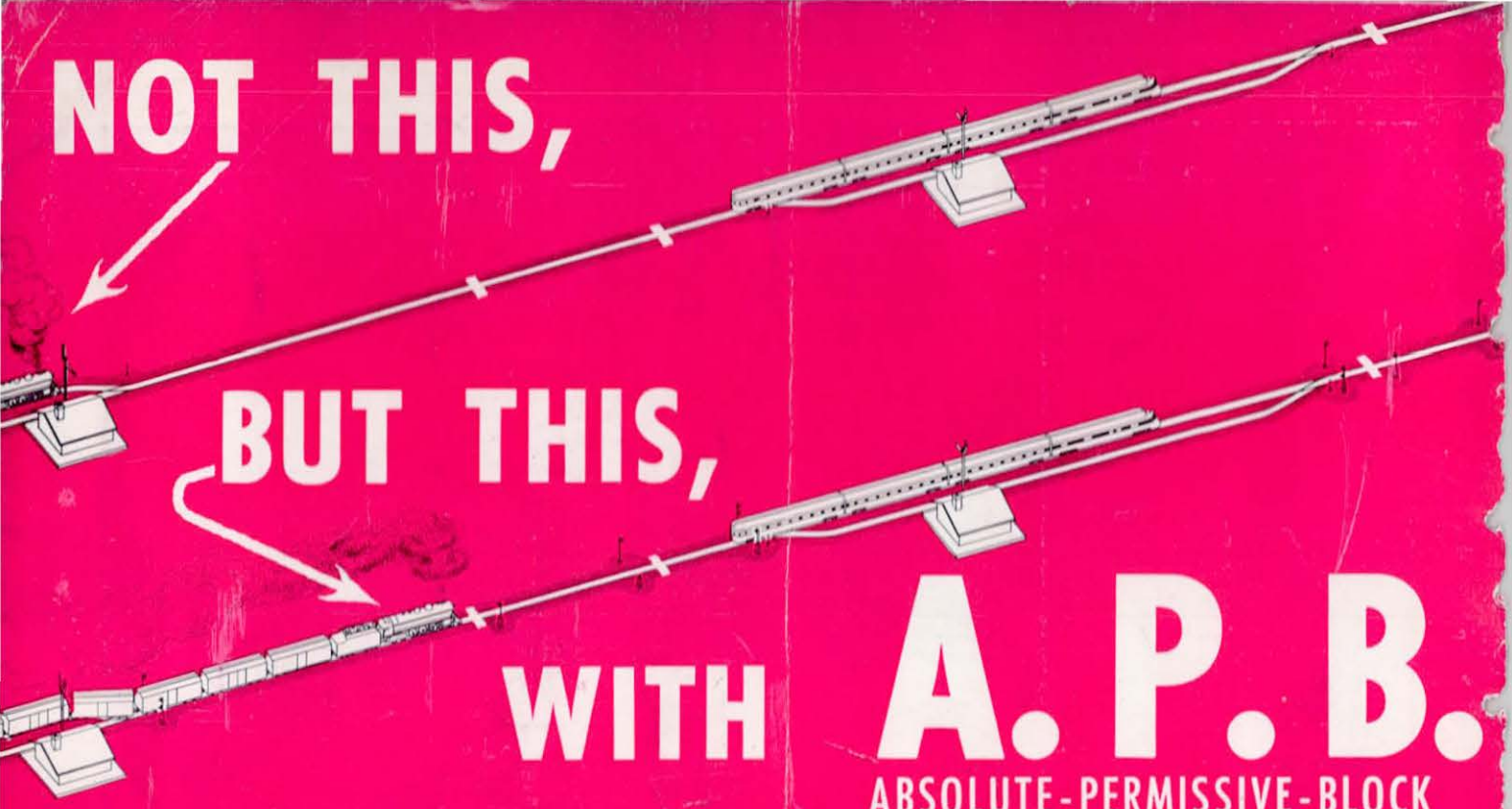

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